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ABSTRACT

Using post-secondary vocational education students as the populations, these two sub-studies of the Project MINI-SCORE sought to determine the extent to which pre-enrollment standardized test data can be used to predict vocational success. For the purpose of the study, vocational success was defined either as successful graduation or successful graduation plus employment. The first sub-study investigated: (1) the ability of each of the separate scales of each instrument to differentiate occupational groups, and (2) the extent of difference between groups defined as successful graduates or as successful graduates employed in related occupations 1 year after training. The second sub-study investigated the ability of each total instrument to differentiate between occupational groups, and developed a method of presenting data pertaining to a multi-scale test instrument in the form of a counseling aid. Results of these sub-studies tend to indicate that there are significant differences between the types of people who enter and succeed in different occupations, and that it is possible to cluster occupations based on the characteristics of people who enter them. Related documents are available as VT 016 149-VT 016 152 in this issue. (Author/JS)

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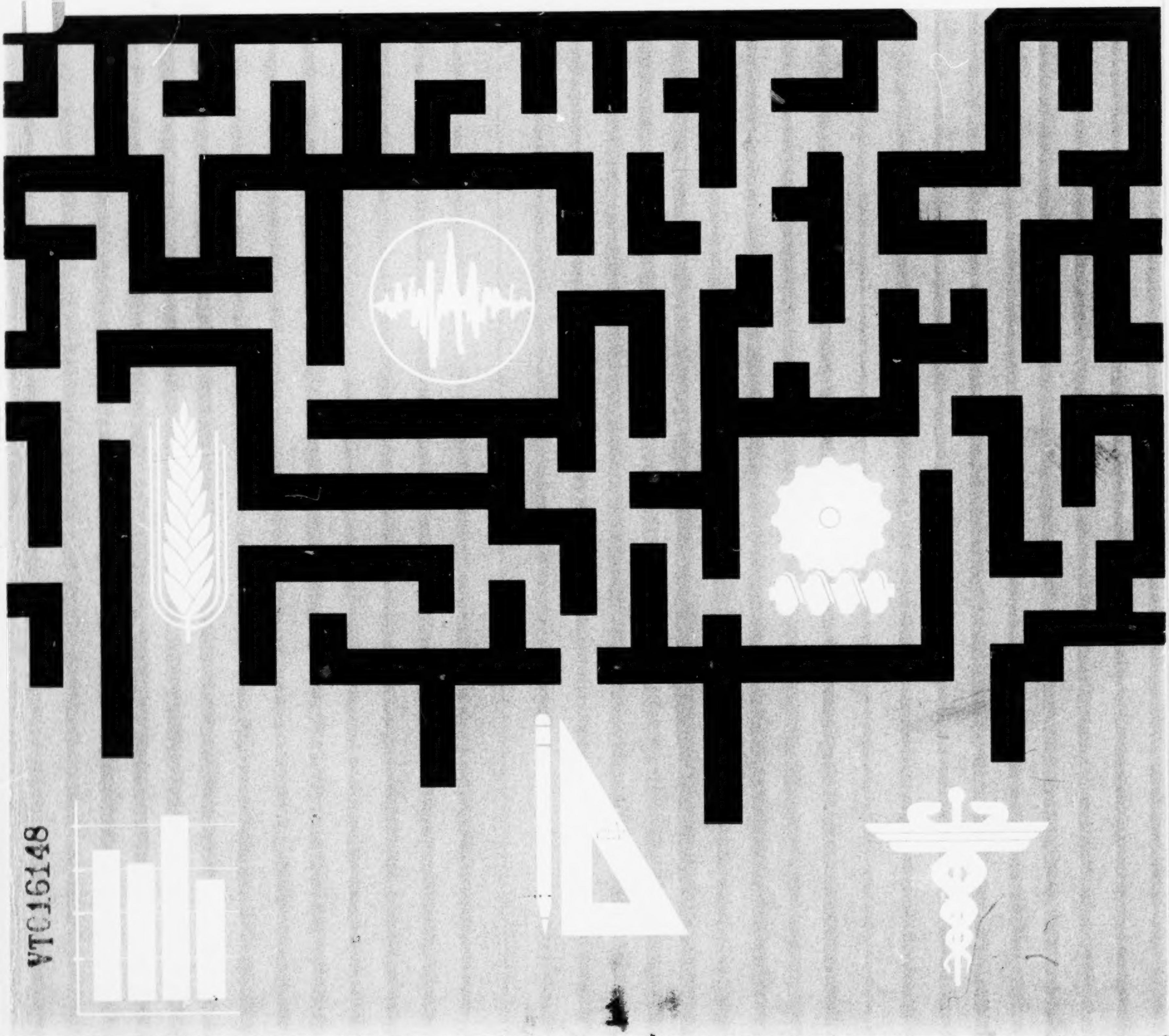
PROJECT MINI-SCORE
FINAL TECHNICAL REPORT

The Ability of Standardized Test Instruments to Differentiate Membership in Different Vocational-Technical Curricula



VT016148

PROJECT MINI-SCORE FINAL TECHNICAL REPORT:

THE ABILITY OF STANDARDIZED TEST INSTRUMENTS TO DIFFERENTIATE MEMBERSHIP IN DIFFERENT VOCATIONAL-TECHNICAL CURRICULA

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Project MINI-SCORE
(Minnesota Student Characteristics and
Occupationally Related Education)
Department of Industrial Education
University of Minnesota
March, 1972

FOREWORD

This technical report is one of the technical reports of Project MINI-SCORE which summarize the findings of six years of intensive research into possible relationships between standardized test measures and a number of different criteria of vocational student success. The technical reports present a detailed discussion of Project findings. A general discussion of the goals and objectives of the total Project and the major findings can be found in the publication entitled PROJECT MINI-SCORE FINAL REPORT.

Through Project MINI-SCORE, test data consisting of measures derived from six separate instruments and test batteries were gathered on individual applicants to the area vocational-technical schools of Minnesota. The tests included in the battery were: (1) the General Aptitude Test Battery (Form B) written portions only, (2) the Minnesota Vocational Interest Inventory, (3) the Sixteen Personality Factor Questionnaire (Form C), (4) the Minnesota Importance Questionnaire (30-scale version), (5) the Vocational Development Inventory, and (6) the Minnesota Scholastic Aptitude Test. In addition, personal descriptive data were obtained from the students through the use of a questionnaire. The data from these instruments were analyzed to determine which of the information gathered would be useful in counseling individuals with reference to full-time, post-high school vocational-technical courses offered in the area vocational-technical schools of Minnesota. Measures of vocational student success included in the Project were: (1) reported graduation versus dropping out of programs, (2) employment status one year after graduation, (3) job satisfaction one year after graduation, and (4) job satisfactoriness one year after graduation.

The titles of all of the final technical reports of the Project can be found on the back cover of this report. Additional publications of Project MINI-SCORE which have dealt with some of the critical issues in vocational education research are listed on the last page. Limited numbers of copies of these reports are available.

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ABSTRACT
(OVERALL SUMMARY)

This report summarizes the results of two Project MINI-SCORE sub-studies aimed at determining the extent to which pre-enrollment standardized test instrument data are capable of providing meaningful information which can be used to differentiate persons who are later successful in different occupations.

The investigations were conducted using two different definitions of vocational student success. The first was successful graduation and the second was successful graduation plus employment in a related occupation one year after training. The first sub-study investigated (1) the ability of each of the separate scales of each of the instruments to differentiate occupational groups and (2) the extent to which groups defined as successful graduates and groups defined as successful graduates who were employed in related occupations one year after training differed. The second sub-study investigated the ability of each total instrument to differentiate occupational groups and developed a method of presenting data pertaining to a multi-scale test instrument in the form of a counseling aid.

The population of Minnesota post-high school area vocational-technical school students included in these studies was divided into three sub-parts. The first contained those people who had enrolled in curricula which included primarily males; the second contained those people who had enrolled in curricula which included primarily females; and the third contained those people who had enrolled in occupational curricula which included both males and females without a predominance of either sex. The analyses were conducted separately based upon the sex of the individuals included in the different curricula because past analyses had indicated that the scores of people on the standardized tests included varied systematically with the sex of an individual. The findings

presented in the second part of this report also bear out this fact.

The results obtained from both of the sub-studies which are reported herein tend to indicate that there are significant differences between the types of people who enter and succeed in different occupations on those factors measured by the standardized instruments included in the Project MINI-SCORE test battery. These differences were reflected in both the analyses of each of the separate scales of each of the instruments and the analyses of each of the instruments as a whole using each of the two definitions of success. Each of the scales of the GATB, MVII, VDI and MSAT revealed significant differences while some of the 16PF and MIQ scales revealed significant differences. The largest differences between the groups were found using the MVII. The analyses relative to the total instruments also indicated that it is possible to cluster occupations based on the characteristics of people who enter them. However, the occupational clusters derived through the use of standardized test data differ somewhat depending upon the constructs measured by an instrument. The investigation into differences between graduates and graduates who were employed in related occupations one year after training indicated that the groups were more similar than different.

The implications of these findings are great for persons interested in counseling individuals who wish to choose among a number of alternative vocational programs available to them. The results imply that it would be possible to present a person with valuable information, based upon the standardized tests used in the Project MINI-SCORE test battery, that he could use while exploring occupational alternatives. Also, the lack of differences between the graduates and those graduates who were employed in jobs related to training one year after graduation implies that little can be gained in the improvement of counseling aids by spending the energy necessary to identify graduates who are successfully employed on the job. Apparently, counseling aids based on graduates would tend to be very similar to those based upon graduates successful on the job.

In light of the findings of these two studies, three different methods of presenting counseling information to students were developed. The first was a method using norm profiles which is presented in a series of norm booklets (see the back cover of this document for a list of these publications). The second was a graphic method based upon discriminant analysis which is described and presented in detail in part two of this report. (These first two methods can be used directly by counselors.) The third method requires a computer to implement. This methodology is termed the Centour methodology and its application as used in Project MINI-SCORE is described in an article entitled "The Centour Methodology Applied to Vocational Student Counseling and Admissions" (see Journal of Industrial Teacher Education, Fall, 1969). This latter methodology was adopted and implemented by the State of Minnesota in the Minnesota Statewide Vocational Testing Program. Complete details on the total system as it was implemented can be found in the School Counselors' Handbook of the Minnesota Statewide Vocational Testing Program.

Persons interested in findings concerning the ability of the standardized tests to predict success in an occupation once an occupation has been selected are referred to other Project MINI-SCORE reports. The Technical Report entitled The Ability of Standardized Test Instruments To Predict Training Success and Employment Success contains a detailed discussion of findings and the Project MINI-SCORE Final Report contains a general discussion of findings.

INTRODUCTION

The Project MINI-SCORE studies reported herein utilized both the univariate and multivariate statistical techniques to investigate the ability of the instruments included in the Project MINI-SCORE test battery to differentiate group membership.[1] The instruments included in the battery were selected to represent the majority of those factors thought to be possible predictors of vocational student success as determined from the literature. The test instruments were administered to persons applying for admission to the post-high school area vocational-technical schools of Minnesota between September 1, 1966 and October 1, 1968. The battery included: (1) The *General Aptitude Test Battery* (Form B) (GATB), written portions only (GATB Manual, Section III, 1970); (2) the *Minnesota Vocational Interest Inventory* (MVII) (Clark and Campbell, 1965); (3) the *Sixteen Personality Factor Questionnaire* (Form C) (16PF) (16PF Handbook, 1962); (4) the *Minnesota Importance Questionnaire* (MIQ), 30-scale version (Weiss and others, 1964, 1969); (5) The *Vocational Development Inventory* (VDI) (Crites, 1969); and (6) the *Minnesota Scholastic Aptitude Test* (MSAT) (Berdie and others, 1962). A listing of the scales included in each instrument can be found in Appendix C, Table 1C.

The groups included in this report represented people who were tested and later became successful graduates of selected curricula offered by the schools. Success was defined in two ways, both as graduating from a program and as being employed one year after graduation in an occupation related to the curriculum from which the student graduated. These two definitions of success were adopted because they have been used most frequently in the past by vocational educators.

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[1] A discussion of the ability of the instruments to differentiate successful from unsuccessful people within an occupational cluster can be found in the Project MINI-SCORE final technical report entitled *The Ability of Standardized Tests to Predict Training Success and Employment Success.*

Information concerning whether students graduated from the programs they originally enrolled in was provided by the schools. Information concerning whether graduates were employed in related occupations one year after graduation was obtained through the use of a mailed questionnaire which yielded 85 percent returns.

The desirability of counseling aids to assist individuals in learning about themselves in relation to occupations has been documented since Parsons wrote his book, Choosing a Vocation (Parsons, 1909). Since that time, persons attempting to develop predictive counseling aids have discovered that two problems are faced by the individual who wishes predictive information concerning his possibility of success in an occupation. The two problems are logically related. First, he needs information concerning what occupation he might wish to enter. Second, he needs information concerning his chances of success in that occupation. Counseling aids which are developed to solve the first problem generally concentrate on assisting an individual with determining group membership. In other words, how similar is the individual to those who have been successful in a variety of occupations? Counseling aids developed to solve the second problem concentrate on predicting success in the occupation. After obtaining knowledge of the similarity of an individual to successful people in an occupation, this additional knowledge is used to determine his probability of success in that occupation. The logic upon which this two-stage predictive model is based is discussed in detail in the book entitled Multivariate Statistics for Personnel Classification (Rulon and others, 1967) and is termed the joint probability model.

Part One of the study, entitled "The Ability of Each of the Instrument Scales to Differentiate Membership in Different Vocational-Technical Curricula," investigated the ability of each scale of each instrument to differentiate among successful people from various occupational curricula utilizing univariate analysis of variance. This technique was successfully used in another Project MINI-SCORE study (Pucel, Nelson, Wheeler, 1970). Part Two, entitled "The Ability of Each of the Multi-Scale Instruments to Differentiate Membership in Different Vocational-Technical Curricula," investigated the ability of each of the total instruments to differentiate among successful people from the various curricula utilizing multiple discriminant analysis.

PART ONE

THE ABILITY OF EACH OF THE INSTRUMENT SCALES TO DIFFERENTIATE MEMBERSHIP IN DIFFERENT VOCATIONAL-TECHNICAL CURRICULA (UNIVARIATE ANALYSIS)

Objective

The objective of this part of the study was to determine the ability of each of the scales of each of the six instruments included in the Project MINI-SCORE pre-enrollment test battery to differentiate among graduates of various vocational-technical curricula, and among graduates of various vocational-technical curricula who were employed in a job related to training one year after graduation. Persons concerned with developing normative counseling aids have generally assumed that normative data produced relative to people who were successful on the job would be more effective than those produced relative to people who were successful in training. This assumption supposed that the norms developed from the two groups would be different. A secondary purpose of this part of the study was to determine whether the graduate population and the employed related population did, in fact, differ significantly in terms of the separate test scales.

Population

The analyses included in this study were carried out on two populations referred to as the "graduate" and "employed related" populations. The "graduate" population included all students in eighteen selected curricula who (1) had applied to one of the twenty-four cooperating Minnesota Area Vocational-Technical schools during the period from September 1, 1966, to October 1, 1968; (2) had taken the Project MINI-SCORE test battery; and (3) had later graduated from the curriculum in which they enrolled before July, 1970 (see Appendix F for a list of the schools). The second population, "employed related," included those students in the "graduate" population who were employed on a job related to their training one year after graduation and who were followed up before July 15, 1970. Approximately 85% of the graduates followed up responded to the mailed follow-up questionnaires. (A more detailed description of the vocational student population included in Project MINI-SCORE can be found in the document entitled Project MINI-SCORE Final Report.)

The eighteen curricula selected for Part One of this study were twelve predominantly male groups and six predominantly female groups which had at least twenty individuals in the employed related category. The curricula were grouped according to sex because other Project MINI-SCORE studies detected differences between males and females on the variables being analyzed which were so large they tended to overshadow other potentially important findings (see Pucel and others, 1972). The effect of differences due to sex are also apparent in the second part of this report. Table 1 shows the the sizes of these groups. Complete data were available on all instruments except MSAT for each individual. The number of individuals in each curriculum for whom MSAT scores were available are reported separately, in parentheses. Care must be taken when interpreting the analyses related to the MSAT since persons who had taken the MSAT were systematically different from those who had not. In order to have an MSAT score, most people would have had to have been high school juniors in Minnesota since 1955. This means that persons who attended high school before that time or who were high school drop-outs prior to their junior year would not have had MSAT scores. The same twelve male curricula and six female curricula were used for both the graduate analyses and the employed related analyses. The sizes of the groups of graduates employed in a related occupation are smaller than the sizes of the graduate groups since some graduates did not enter occupations related to training. Some of the graduates entered unrelated occupations, some remained

TABLE 1

CURRICULUM AREAS INVESTIGATED

CURRICULUM	NUMBER OF GRADS		NUMBER OF GRADS EMPLOYED IN A JOB RELATED TO TRAINING	
	Total	(with MSAT)	Total	(with MSAT)
Predominantly Male Curriculums				
Agri-Technology	115	(86)	23	(22)
Aircraft Mechanics	103	(69)	31	(15)
Automotives	495	(381)	130	(108)
Carpentry	181	(148)	64	(59)
Diesel Mechanics	69	(48)	20	(16)
Electronics	202	(159)	51	(40)
Farm Equipment Mechanics	72	(66)	23	(22)
Machine Shop	166	(131)	68	(59)
Mechanical Drafting & Design	251	(204)	82	(72)
Optical Technology	35	(21)	25	(14)
Power and Home Electricity	207	(150)	87	(74)
Welding	254	(194)	51	(40)
Predominantly Female Curriculums				
Clerical Training	551	(413)	331	(264)
Cosmetology	249	(183)	103	(85)
Dental Assistant	52	(38)	24	(17)
Medical Laboratory Assistant	49	(30)	36	(24)
Practical Nursing	509	(368)	334	(249)
Secretarial Training	739	(555)	480	(382)

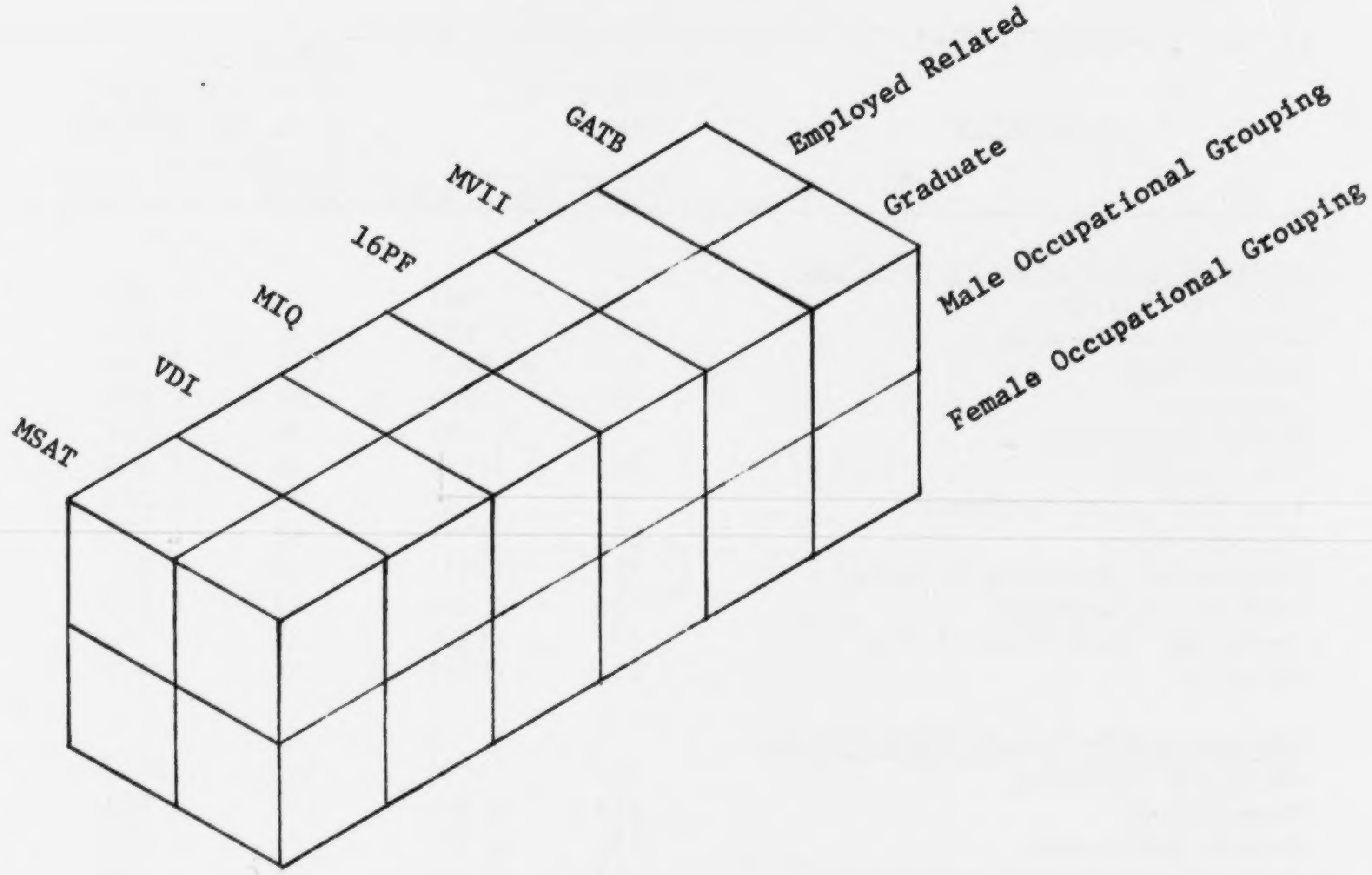
unemployed, some were unavailable for employment because of military service, some became housewives, and some were unavailable for other reasons.

Procedure

Each of the scales of each instrument in the Project MINI-SCORE test battery was analyzed to determine the ability of each scale to distinguish the different curricula for each of the two populations. One-way analyses of variance were used with significant F-test results reported at the .05 and .01 level. Four analyses of variance were run on each scale; one for male graduates, one for female graduates, one for male employed related, and one for female employed related (see Figure 1). In addition, an ANOVA was run on each scale to determine

FIGURE 1

SCHEMATIC
OF THE TWENTY-FOUR UNIVARIATE ANALYSES


MSAT
VDI
MIQ
16PF
MVII
GATB
Employed Related
Graduate
Male Occupational Grouping
Female Occupational Grouping

if the group that became employed in a related occupation was systematically different than the graduate group. This ANOVA is not parallel to the other analyses and is not included in Figure 1.

Results Related to Graduates

Results related to the graduate groups regarding all six instruments are reported below. They are reported separately in relation to each instrument. (See Appendix A for complete tables including individual group mean scores and standard deviations.)

The General Aptitude Test Battery (GATB)

The written portion of the GATB consists of eight part scores which have been re-interpreted as seven factorially derived aptitude scores (GATB Manual, Section III, 1970). The aptitude scores were used in this study. The F-values for the analyses of variance between groups for the GATB are reported in Table 2. Significant differences were found among the male graduate groups and among female graduate groups on all scales of the GATB at the .01 level. For both male and female groups, the highest F-values were associated with the following three scales: G-Intelligence, V-Verbal Aptitude, and N-Numerical Aptitude. Between-group differences were more evident for the female groups than for the male groups. Examination of the male group means (see Appendix 1A) shows that electronics, mechanical drafting and design, and optical technology groups have high means while welding means are low on the three scales G, V, and N. In the case of the female groups, high means for the medical laboratory assistant group and low means for cosmetology and clerical groups seem to account for the large F-values on those three GATB scales (see Appendix 2A). The GATB scales appear to be very effective in separating the graduates of the different curricula under study.

TABLE 2

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (GRADUATES)
[GATB B-1002 (FORM B) APTITUDE SCALES]

SCALES	F - VALUE MALE GROUPS	 FEMALE GROUPS
G-Intelligence	**23.902	**41.559
V-Verbal Aptitude	**22.892	**50.707
N-Numerical Aptitude	**16.127	**28.189
S-Spatial Aptitude	**13.953	**13.305
P-Form Perception	** 5.922	** 7.911
Q-Clerical Perception	** 7.355	** 7.431
K-Motor Coordination	** 5.448	**14.668

**Significant at .01

The Minnesota Vocational Interest Inventory (MVII)

The nine homogeneous keys of the MVII were used in this study.[1] The results related to the MVII are reported in Table 3. The MVII was also effective in significantly differentiating among the male graduate groups and among the female graduate groups at the .01 level. Two very large F-values occurred for the female groups. The F-value for H-2, Health Service, was 447.616. An examination of group means on that scale (see Appendix 4A) shows that practical nursing and medical laboratory assistant groups scored quite high, while clerical and secretarial training groups scored low. The high F-value, F = 379.899, for H-3, Office Work, seems to be caused by the high scores of clerical and secretarial training groups, and the low scores for practical nursing and medical

TABLE 3

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (GRADUATES)
(MVII HOMOGENEOUS KEYS)

SCALES	F - VALUES MALE GROUPS	F - VALUES FEMALE GROUPS
H-1 Mechanical	**27.793	** 17.203
H-2 Health Service	**13.795	**447.616
H-3 Office Work	**17.667	**379.899
H-4 Electronics	**85.308	** 31.257
H-5 Food Service	** 3.244	** 43.409
H-6 Carpentry	**74.302	** 8.098
H-7 Sales-Office	**20.888	** 56.015
H-8 Clean Hands	** 9.406	** 94.922
H-9 Outdoors	**11.255	** 8.254

**Significant at .01

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[1] It must be noted that the populations used in this study exhibit distributions on the MVII homogeneous keys which are considerably non-normal. Investigation of this problem in another Project MINI-SCORE study (Pucel, Nelson, Wheeler, 1970A) indicated that results of nonparametric analyses using chi-square agreed very well with results of parametric analyses using ANOVA.

lab assistant groups. This probably indicates that scales H-2 and H-3 do a good job of differentiating between the health-oriented curricula and clerical-secretarial type curricula. The largest F-values for the male groups were H-4, Electronics, F = 85.308, and H-6, Carpentry, F = 74.302. High means for electronics and for power and home electricity probably caused the high F-value on H-4. The high F-value for H-6 seems to be due to a high mean for the carpentry group. It is interesting that group means rank in approximately reverse order on these two scales. Electronics has the highest mean on H-4, lowest on H-6. Power and home electricity is second highest on H-4, second lowest on H-6. The carpentry mean is lowest on H-4, highest on H-6 (see Appendix 3A).

The Sixteen Personality Factor Questionnaire (16PF)

Table 4 reports the results of the 16PF analyses of variance. The scales of the 16PF were not as effective as the GATB or MVII scales in distinguishing between graduates of the different curricula. The male graduate groups were significantly different on nine of the sixteen scales. The differentiation among the female graduate groups was better with fourteen of the sixteen scales significant. On the three scales with the largest F-values for the female groups, A-Aloof vs Outgoing, Q1-Conservative vs Experimenting, and Q3-Uncontrolled vs Self-Controlled, the practical nursing and medical lab assistant groups had high mean scores, while the clerical and secretarial training groups had low mean scores (see Appendix 6A). The male groups showed no clear patterns. Groups which scored high on one scale scored low on others. However, it is interesing that the high scoring groups on Scale G-Casual vs Conscientious were farm equipment mechanics and agri-technology while the electronics group scored high on M-Conventional vs Eccentric and Q1-Conservative vs Experimenting (see Appendix 5A).

TABLE 4

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (GRADUATES)
(16PF QUESTIONNAIRE SCALES, FORM C)

SCALES	F - VALUE MALE GROUPS	F - VALUE FEMALE GROUPS
A-Aloof vs Outgoing	**3.086	**12.797
B-Dull vs Bright	**7.688	** 8.017
C-Emotional vs Mature	1.739	** 4.068
E-Submissive vs Dominant	**2.516	* 2.234
F-Glum vs Enthusiastic	.886	** 3.620
G-Casual vs Conscientious	**3.951	** 3.937
H-Timid vs Adventurous	1.693	** 6.525
I-Tough vs Sensitive	1.286	* 2.989
L-Trustful vs Suspecting	1.403	** 7.993
M-Conventional vs Eccent.	**4.730	1.416
N-Simple vs Sophisticated	1.250	* 2.664
O-Confident vs Insecure	*1.790	1.665
Q1-Conserv. vs Experim.	**4.785	**12.799
Q2-Dependent vs Self-Suf.	*2.162	** 4.801
Q3-Uncontrol. vs Self-Con.	*1.872	**19.249
Q4-Stable vs Tense	1.721	** 9.431

*Significant at .05
**Significant at .01

The Minnesota Importance Questionnaire (MIQ)

The results using the MIQ are reported in Table 5. Twenty-seven of the thirty scales were effective in differentiating between the female graduate groups. Seventeen scales significantly differentiated the male graduate groups. The MIQ was considerably more effective in differentiating female groups than male groups. The number and size of the significant F-values were much larger for the female groups. Looking at the means of the female groups on the three scales with the largest F-values shows the practical nursing group is most unlike the other groups. On scale 4, Advancement, and scale 9, Creativity, practical nursing scored lower than the other female groups. On scale 15, Social Service, the practical nursing scores were higher than the other female

TABLE 5

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (GRADUATES) (MIQ - 30 SCALES)

SCALES	F - VALUE MALE GROUPS	F - VALUE FEMALE GROUPS
1. Ability Utilization	1.453	** 3.979
2. Achievement	1.479	**10.901
3. Activity	*2.119	** 7.198
4. Advancement	**3.799	**64.820
5. Authority	1.240	** 5.222
6. Company Pol. & Prac.	*2.122	** 6.905
7 Compensation I	.816	**23.259
8. Co-workers	1.230	** 6.372
9. Creativity	*2.058	**38.697
10. Independence	**3.312	**18.860
11. Moral Values	**2.682	** 7.777
12. Recognition	1.749	**26.294
13. Responsibility	**2.434	**13.100
14. Security	**2.334	** 3.340
15. Social Service	**3.127	**88.577
16. Social Status	*2.141	**14.584
17. Supervisor-Human Rel.	1.732	** 3.986
18. Supervisor-Technical	*1.884	1.273
19. Variety	**2.629	* 2.656
20. Working Conditions	1.371	** 8.999
21. Work Challenge	1.576	**10.569
22. Company Image	1.500	1.323
23. Organization Control	**2.486	**22.404
24. Feed Back	1.063	** 3.270
25. Physical Facilities	*1.840	** 7.346
26. Work Relevance	**2.528	.771
27. Company Prestige	*2.033	**11.853
28. Company Goals	.916	** 3.045
29. Closure	**2.622	** 8.280
30. Compensation II	1.331	** 8.963

*Significant at .05
**Significant at .01

groups (see Appendix 8A). Scales 4 and 15 were also two of the better differentiators of male groups. Male groups scoring high on scale 4, Advancement, tended to score low on scale 10, Independence, and scale 15, Social Service (see Appendix 7A).

The Vocational Development Inventory (VDI)

The VDI is designed to measure attitudes related to vocational development. It consists of only one scale. Table 6 presents the results of the VDI analyses of variance. Both male graduate groups and female graduate groups were significantly differentiated by the VDI. The F-value for female groups was much larger than for the male groups. From the means of the female groups, it appears that this large F-value is caused by high means for practical nursing, dental assistant, and medical lab assistant groups; and low means for cosmetology, clerical training, and secretarial training groups (see Appendix 10A). Among the male groups, the diesel mechanics, optical technology, and aircraft mechanic curricula showed high means, while the welding curriculum had a low mean (see Appendix 9A).

TABLE 6

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (GRADUATES) (VOCATIONAL DEVELOPMENT INVENTORY SCORE)

SCALES	F - VALUE MALE GROUPS	F - VALUE FEMALE GROUPS
VDI Score	**5.590	**36.085

**Significant at .01

The Minnesota Scholastic Aptitude Test (MSAT)

The MSAT was used to measure scholastic aptitude. These test scores were obtained from the Minnestoa Statewide Testing Program. As a result, MSAT scores were only available for part of the population stated, as indicated in Table 1. Table 7 shows the ANOVA results for MSAT. Curricula within both male and female graduate groups were significantly different. The medical

TABLE 7

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (GRADUATES)
(MSAT SCORE)

SCALES	F - VALUE MALE GROUPS	F - VALUE FEMALE GROUPS
MSAT Score	**46.953	**43.652

**Significant at .01

laboratory assistant group was high and the clerical training group low among the female group means (see Appendix 10A). The highest means for the male groups were for the electronics curriculum, the mechanical drafting curriculum, the aircraft mechanic curriculum, and the optical technology curriculum. The welding group had a low mean (see Appendix 9A).

Results Related to Individuals Employed in Related Occupations

Results related to the employed related groups regarding all six instruments are reported below in relation to each instrument separately. (See Appendix B for complete tables including individual group mean scores and standard deviations.)

The General Aptitude Test Battery (GATB)

The analyses of variance F-values for the GATB are reported in Table 8. Both male and female employed related groups were significantly differentiated by all seven of the GATB scales. G-Intelligence and V-Verbal Aptitude were the two scales which were most effective in separating curricula for both male groups and for female groups. The high F-values for male groups on scales G and V appear to be caused by high scores of persons in electronics, aircraft mechanics, mechanical drafting and design, and optical technology, and by low scores for people in welding (see Appendix 1B). In the case of female groups,

TABLE 8

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (EMPLOYED RELATED)
[GATB B-1002 (FORM B) APTITUDE SCALES]

SCALES	F - VALUE MALES GROUPS	FEMALE GROUPS
G-Intelligence	**7.231	**25.543
V-Verbal Aptitude	**9.663	**27.773
N-Numerical Aptitude	**4.992	**17.994
S-Spatial Aptitude	**3.855	**10.717
P-Form Perception	*1.980	** 7.088
Q-Clerical Perception	**2.622	** 4.718
K-Motor Coordination	**2.389	** 6.949

*Significant at .05
**Significant at .01

the high F-values for scales G and V were probably caused by high scores of people in cosmetology and clerical training (see Appendix 2B). Overall, the GATB seems effective in distinguishing between both male employed related groups and female employed related groups.

The Minnesota Vocational Interest Inventory (MVII)

Table 9 displays the F-values of the MVII analyses of variance. All nine scales were effective in significantly differentiating among the female employed related and among the male employed related groups. Two of the F-values for the male groups were several times larger than the other F-values. These were for scale H-4, Electronics, and scale H-6, Carpentry. High group means for two curricula, electronics and power and home electricity, and low group mean for carpentry caused the high F-value on scale H-4, Electronics. The high F-value on H-6, Carpentry, was caused primarily by very low group means for the electronics group and the power and home electricity group together with a high mean for the carpentry group (see Appendix 3B). There were also two very large F-values for the female groups on scales H-2, Health

TABLE 9

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (EMPLOYED RELATED) (MVII HOMOGENEOUS KEYS)

SCALES	F - VALUE MALE GROUPS	 FEMALE GROUPS
H-1 Mechanical	** 8.338	** 9.047
H-2 Health Service	** 5.951	**329.888
H-3 Office Work	** 4.150	**294.596
H-4 Electronics	**29.253	** 20.327
H-5 Food Service	* 1.087	** 26.963
H-6 Carpentry	**24.911	** 4.935
H-7 Sales-Office	** 8.410	** 41.883
H-8 Clean Hands	* 2.089	** 64.641
H-9 Outdoors	** 3.551	** 6.349

*Significant at .05
**Significant at .01

Service, and H-3, Office Work. Looking at group means, scale H-2, Health Service, seems to separate the six female groups into two clusters. Practical nursing, dental assistant, and medical lab assistant have high means while cosmetology, clerical training, and secretarial training have low means. Scale H-3, Office Work, shows high means for clerical and secretarial and low means for practical nursing and medical lab assistant. Two more F-values for female groups were rather high (see Appendix 4B). These scales, H-7, Sales-Office, and H-8, Clean Hands, have group means which tend to support the idea of two female clusters suggested above (see Figure 2). The MVII, like the GATB, does a good job of differentiating between the employed related groups.

The Sixteen Personality Factor Questionnaire (16PF)

The analyses of variance F-values for 16PF analyses are reported in Table 10. Five of the sixteen scales seemed effective in significantly differentiating the employed related male groups (see Appendix 5B). For the employed related female groups, thirteen of the scales had significant F-values. The highest F-value for female groups was scale Q3, Uncontrolled vs Self-Controlled.

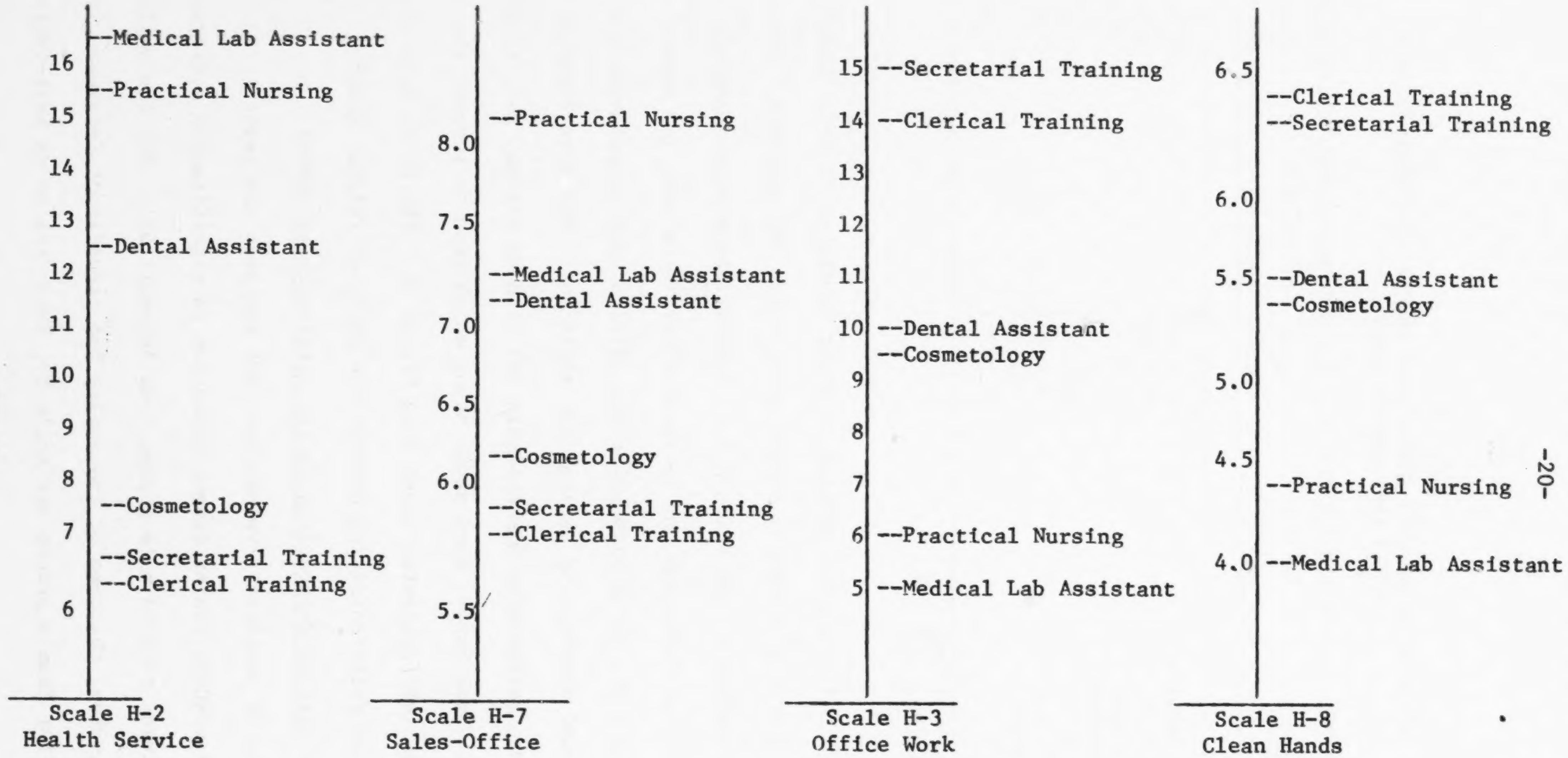


FIGURE 2

COMPARISON OF MEANS OF FEMALE GROUPS ON FOUR
MVII SCALES WITH LARGE F-VALUES
(EMPLOYED RELATED GROUPS)

TABLE 10

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (EMPLOYED RELATED) (16PF SCALES, FORM C)

SCALES	F - VALUE	
	MALE GROUPS	FEMALE GROUPS
A-Aloof vs Outgoing	**2.494	** 9.987
B-Dull vs Bright	*1.960	** 3.507
C-Emotional vs Mature	1.400	* 2.928
E-Submissive vs Dominant	**2.561	1.384
F-Glum vs Enthusiastic	.666	1.668
G-Casual vs Conscientious	1.603	** 3.591
H-Timid vs Adventurous	.804	** 5.627
I-Tough vs Sensitive	.938	* 2.932
L-Trustful vs Suspecting	.935	** 4.944
M-Conventional vs Eccent.	*2.050	1.565
N-Simple vs Sophisticated	1.566	* 2.379
O-Confident vs Insecure	.897	* 2.681
Q1-Conserv. vs Experim.	**3.947	** 9.116
Q2-Dependent vs Self-Suf.	1.592	** 4.108
Q3-Uncontrol. vs Self-Con.	1.506	**15.691
Q4-Stable vs Tense	.964	** 7.383

*Significant at .05
**Significant at .01

Practical nursing and medical lab assistant group means were high on scale Q3, while the dental lab assistant mean was low (see Appendix 6B). Overall, it can only be stated that some of the 16PF scales effectively separate the groups, with more scales able to separate female groups than male groups.

The Minnesota Importance Questionnaire (MIQ)

Table 11 shows the F-values for employed related groups on the MIQ. Eight of the thirty scales significantly differentiated male employed related groups. The largest F-value for male groups was on scale 10, Independence. The group means for welding and for agri-technology were high on this scale, and the diesel mechanics group mean was low (see Appendix 7B). Twenty-five of the thirty scales had significant F-values for the female employed related groups.

TABLE 11

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (EMPLOYED RELATED) (MIQ - 30 SCALES)

SCALES		F - VALUE	
		MALE GROUPS	FEMALE GROUPS
1.	Ability Utilization	1.169	2.078
2.	Achievement	*1.811	** 9.717
3.	Activity	1.369	** 5.866
4.	Advancement	1.654	**46.219
5.	Authority	.836	** 4.542
6.	Company Pol. and Prac.	.981	** 3.586
7.	Compensation I	*2.132	**16.787
8.	Co-workers	.810	** 5.603
9.	Creativity	1.787	**20.928
10.	Independence	**2.434	**14.368
11.	Moral Values	1.574	** 4.588
12.	Recognition	1.327	**19.707
13.	Responsibility	1.520	** 6.441
14.	Security	1.752	* 2.284
15.	Social Service	*2.164	**58.891
16.	Social Status	*1.931	**11.572
17.	Supervisor-Human Rel.	.570	** 4.042
18.	Supervisor-Technical	.435	.435
19.	Variety	1.660	2.017
20.	Working Conditions	*1.827	** 6.775
21.	Work Challenge	1.730	** 7.886
22.	Company Image	.873	1.019
23.	Organization Control	1.718	**14.018
24.	Feed Back	1.005	* 2.625
25.	Physical Facilities	1.332	** 5.329
26.	Work Relevance	1.025	.624
27.	Company Prestige	.963	**10.315
28.	Company Goals	.707	* 2.248
29.	Closure	*1.916	** 3.389
30.	Compensation II	*1.810	** 5.732

*Significant at .05
**Significant at .01

Examination of group means for the female groups shows a clustering of occupations which is fairly consistent for the scales with the highest F-values. Practical nursing, medical lab assistant, and dental assistant seem to cluster together on scale 4 - Advancement, scale 7 - Compensation I, scale 10 -

Independence, scale 16 - Social Status, and scale 23 - Organization Control. Two additional scales with high F-values show practical nursing and medical lab assistant clustering together. These two are scale 15 - Social Service, and scale 27 - Company Prestige (see Appendix 8B). Overall, the MIQ does a good job of separating the female groups, but is relatively ineffective in separating the male groups.

The Vocational Development Inventory (VDI)

Table 12 indicates that the VDI was effective at distinguishing between both the male and the female employed related groups. The F-value for the female groups was much larger than for the male groups, but both were significant at the .01 level. A high group mean for the automotive group and low means for farm equipment mechanics and aircraft mechanics seem to account for the differences between the male groups (see Appendix 9B). For the female groups, practical nursing and medical laboratory assistant groups had high means, and clerical training and cosmetology groups had low means (see Appendix 10B).

TABLE 12

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (EMPLOYED RELATED)
(VOCATIONAL DEVELOPMENT INVENTORY SCORE)

SCALES	F - VALUE MALE GROUPS	F - VALUE FEMALE GROUPS
VDI Score	**2.485	**27.510

**Significant at .01

The Minnesota Scholastic Aptitude Test (MSAT)

Male employed related groups and female employed related groups were both effectively differentiated by the MSAT at the .01 level, as shown by Table 13. The groups with high MSAT means among the male groups were electronics,

TABLE 13

ANOVA OF DIFFERENCES BETWEEN CURRICULUM GROUPS (EMPLOYED RELATED)
(MSAT SCORE)

SCALES	F - VALUE MALE GROUPS	F - VALUE FEMALE GROUPS
MSAT Score	**7.218	**30.312

**Significant at .01

mechanical drafting and design, and agri-technology: while the welding and aircraft mechanics groups had low group means (see Appendix 9B). A high group mean for medical laboratory assistants helped produce the significant F-value for female groups (see Appendix 10B).

Results Related to the Analyses of Variance of Differences Between the Graduate Group and the Employed Related Group for Each Curriculum

The results presented in this section are relative to the question of whether or not norms developed on a population of vocational school graduates would be different than norms developed on a population of graduates who are employed in training related occupations one year after graduation. The extent to which the two groups within each of the curriculum areas were different was investigated by comparing the test scale scores of the two groups using analysis of variance. Table 14 indicates how many scales of each instrument significantly differentiated the graduate group from the employed related group at $\alpha = .10$ for each of the eighteen curricula. The actual F-values associated with each instrument scale for each curriculum can be found in Appendix C. Examination of Table 14 reveals that only three of the eighteen curricula showed significant differences between the graduate group and the employed related group on one or more GATB scales. These curricula were agri-technology, welding and clerical training. Only one of the curricula, electronics, showed

TABLE 14

NUMBER OF SCALES WHICH SIGNIFICANTLY DIFFERENTIATE THE GRADUATE GROUP FROM THE EMPLOYED RELATED GROUP AT A SIGNIFICANCE LEVEL OF .10

	AGRI-TECHNOLOGY	AIRCRAFT MECHANICS	AUTOMOTIVE MECHANICS	CARPENTRY	DIESEL MECHANICS	ELECTRONICS	FARM EQUIPMENT MECHANICS	MACHINE SHOP	MECHANICAL DRAFTING AND DESIGN	OPTICAL TECHNOLOGY	POWER AND HOME ELECTRICITY	WELDING	CLERICAL TRAINING	COSMETOLOGY	DENTAL ASSISTANT	MEDICAL LABORATORY ASSISTANT	PRACTICAL NURSING	SECRETARIAL TRAINING
GATB (Seven Scales)	3	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0
MVII (Nine Scales)	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
16PF (16 Scales)	2	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
MIQ (Thirty Scales)	1	1	0	0	0	1	0	0	0	0	0	2	0	0	2	0	0	0
VDI (One Scale)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MSAT (One Scale)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

any differences based on MVII scales. One or more scales of 16PF separated the graduate group from the employed related group for four of the eighteen curricula - agri-technology, aircraft mechanics, automotive, and diesel mechanics. Five curricula showed differences based on one or more MIQ scales. These were agri-technology, aircraft mechanics, electronics, welding, and dental assistant. There were no differences on the VDI scale. MSAT separated the graduate group from the employed related group for one curriculum, secretarial training. These data seem to indicate the employed related group for each curricula is not very different from the corresponding graduate group. The F-values were also examined at a significance level of .25. At that level there were more scales which significantly differentiated the graduate group from the employed related group, but even at such a relaxed significance level only a small proportion of the scales showed significant F-values.

Part One Conclusions

The analysis of the ability of each of the scales of each of the instruments included in the test battery to differentiate successful persons in different occupations indicated that differences do exist between persons who are successful in the different occupations. These differences exist both between graduates of different occupational training programs and between graduates who later go out on the job and who are successful in an occupation related to the program from which they graduated.

All the scales of four of the instruments were effective in differentiating both among the male groups and among the female groups when success was defined as successful graduation as well as when success was defined as employment in a related occupation. These four instruments were the MVII, MSAT, VDI, and GATB. In all cases differences were significant at at least the .05 level and in most cases differences were significant at the .01 level of significance.

Many of the scales of the 16PF and MIQ also significantly differentiated among the male groups and among the female groups using both criteria of success. In all cases more scales of the 16PF and MIQ were capable of significantly differentiating the female groups than were capable of differentiating the male groups. The F-values, which are related to the magnitude of the differences between groups, were consistently larger for female analyses than they were for the male analyses, suggesting that the ability of these instruments to separate the female groups is greater than their ability to separate the male groups. This finding is logical, however, when one reviews the actual occupations included in the female and male groups. The female groups represent a wider range of occupations than do the male groups. The male groups appear to be representative of a more homogeneous group of occupations.

An attempt to review the results to determine if any clusters of occupations could be determined within the male group and within the female group revealed no readily apparent clusters within the male group. Groups within the male group did not consistently separate themselves as indicated by the analyses of the various instruments. Some clustering was evident among the female groups, however. On the basis of group means, the practical nursing and the medical lab assistant groups clustered together quite consistently at the opposite end of the continuum from the clerical training and the secretarial training groups. In some analyses the dental assistant group joined with the practical nursing and medical lab assistant groups and the cosmetology group joined with the secretarial and clerical training groups.

Using the scales included in the battery, few differences were found between those people who were successful graduates and those people who later went on to become successful in a job related to training. This finding would appear to indicate that in further studies attempting to develop normative data for counseling purposes, using graduate groups as criterion groups for the development of normative data would produce approximately the same level of precision of normative data as using data on people who were employed in occupations related to training one year after graduation.

PART TWO

THE ABILITY OF EACH OF THE MULTI-SCALE INSTRUMENTS TO DIFFERENTIATE MEMBERSHIP IN DIFFERENT VOCATIONAL-TECHNICAL CURRICULA (MULTIVARIATE ANALYSIS)

Objective

The major objective of Part Two of this Project MINI-SCORE study was to investigate the ability of the multi-scale instruments included in the Project (GATB, MVII, 16PF, and MIQ) to individually discriminate among groups that attended vocational schools and graduated, as well as groups that graduated and were later successfully employed in occupations related to the program from which they graduated. A second objective was to develop a method of reporting the findings that would be useful to people who are trying to assist individuals to select among alternative occupational education programs. As indicated, success was defined in two ways, the first being successful graduation from the program the student was enrolled in, and the second successful graduation from the program the student was enrolled in plus successful employment in an occupation related to the program one year after training. Analyses related to each of the two methods of defining success were conducted separately. The analyses reported in this study were conducted using discriminant analysis. A similar multivariate analysis was also conducted using the Centour methodology; a description of this system can be found in two previously published references (Pucel, 1969; Minnesota Statewide Vocational Testing Program handbook, no date).

Population

The population used in Part Two of the study included all students and groups included in Part One, plus a group of three curricula which included approximately an equal number of males and females. The curricula were grouped according to sex because other Project MINI-SCORE studies detected differences between males and females on the variables being analyzed which were so large they tended to overshadow other potentially important findings (Pucel and others, 1972). These findings were also supported by this sub-study.

Each curriculum selected had at least twenty individuals in the employed-related category. The same curricula were used in both the "graduate" and "employed related" analyses. Tables 15, 16, and 17 show the curricula selected and the group sizes in both the "graduate" and "employed related" populations.

The size of the "employed related" population is less for each of the curricula than its "graduate" counterpart because some of the graduates from each curriculum were not employed in occupations related to the curriculums they graduated from one year after graduation. Some graduates entered unrelated occupations, were unemployed, entered military service, became housewives, or were unavailable for other reasons.

TABLE 15

MALE OCCUPATIONAL GROUPING

OCCUPATIONAL CLUSTERS	I.D. CODE	N EMPLOYED RELATED	N GRADUATES
Electronics	1	51	202
Power and Home Electricity	2	87	207
Carpentry	3	64	181
Automotive Mechanics	4	130	495
Mechanical Drafting and Design	5	82	251
Diesel Mechanics	6	20	69
Machine Shop	7	68	166
Welding	8	51	254
Farm Equipment Mechanics	9	23	72
Aircraft Mechanics	10	31	103
Agri-Technology	11	23	115
Optical Technology	12	25	35

TABLE 16

FEMALE OCCUPATIONAL GROUPING

OCCUPATIONAL CLUSTERS	I.D. CODE	N EMPLOYED RELATED	N GRADUATE
Practical Nursing	1	334	509
Cosmetology	2	103	249
Dental Assistant	3	24	52
Medical Lab Assistant	4	36	49
Clerical Training	5	331	551
Secretarial Training	6	480	739

TABLE 17

COMBINED OCCUPATIONAL GROUPING

OCCUPATIONAL CLUSTERS	I.D. CODE	N EMPLOYED RELATED	N GRADUATE
Electronics	1	51	202
Power and Home Electricity	2	87	207
Practical Nursing	3	334	509
Carpentry	4	64	181
Automotive Mechanics	5	130	495
Mechanical Drafting & Design	6	82	251
Diesel Mechanics	7	20	69
Machine Shop	8	68	166
Welding	9	51	254
Farm Equipment Mechanics	10	23	72
Cosmetology	11	103	249
Aircraft Mechanics	12	31	103
Dental Assistant	13	24	52
Agri-Technology	14	23	115
Optical Technology	15	25	35
Medical Lab Assistant	16	36	49
*Sales	17	37	108
*Accounting	18	162	398
Clerical Training	19	331	551
Secretarial Training	20	480	739
*Data Processing	21	65	157

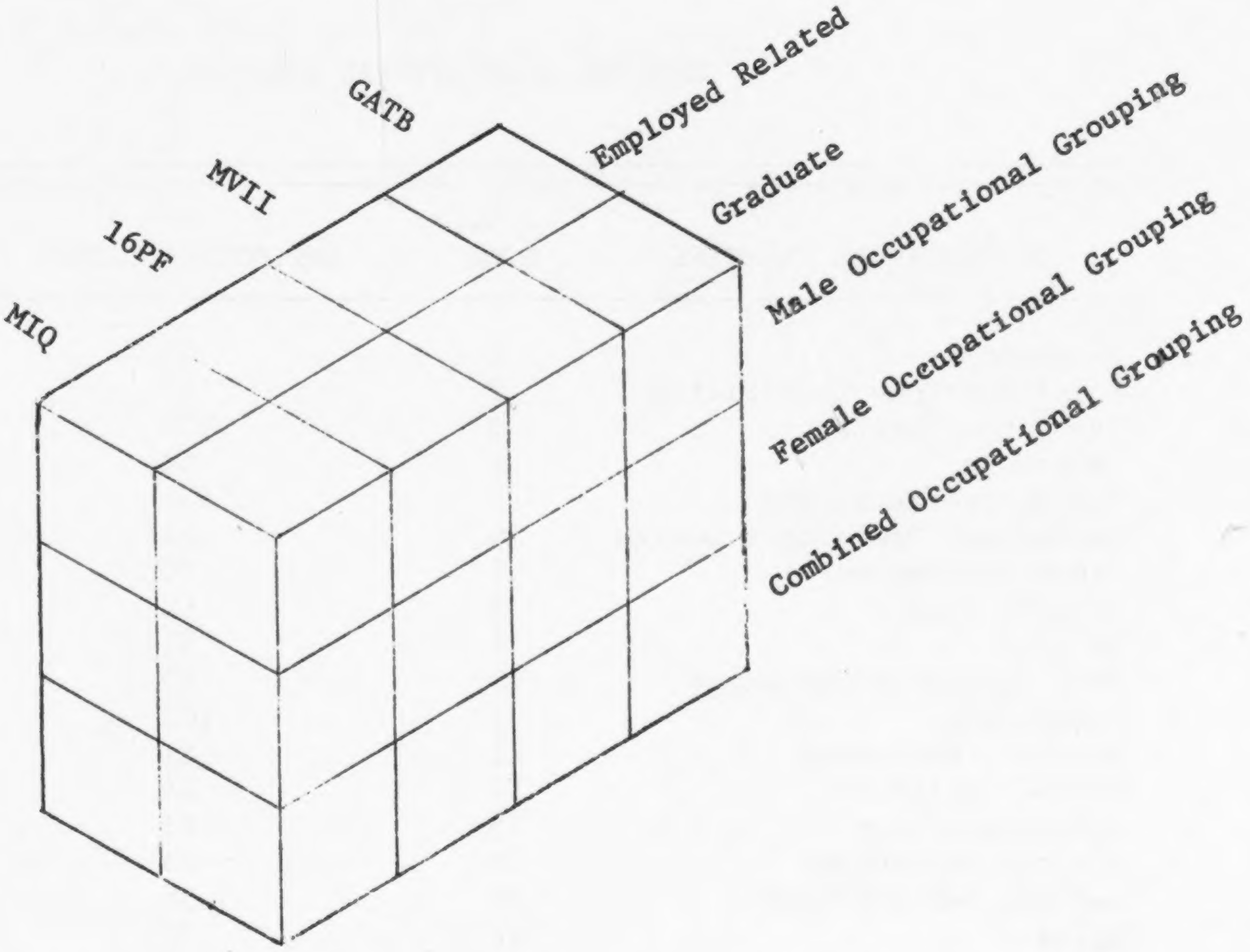
*Curricula containing both male and female

Procedure

The analyses were conducted for each of the four instruments separately on each of the graduate and employed related classifications for each of the three curriculum groupings (male, female, combined). Figure 3 illustrates the instrument by occupational status by sex classification system, which underlies the twenty-four analyses reported in this part of the study.

FIGURE 3

SCHEMATIC
OF THE TWENTY-FOUR MULTIVARIATE ANALYSES


GATB
MVII
16PF
MIQ
Employed Related
Graduate
Male Occupational Grouping
Female Occupational Grouping
Combined Occupational Grouping

Discriminant analysis was the method used in this part of the study to investigate the differences between groups of individuals who were successful in different occupations utilizing the Project MINI-SCORE pre-enrollment test data. Discriminant analysis is a technique which attempts to maximally separate groups of individuals on the basis of whatever the independent variables are that are being used to describe the groups (Nunnaly, 1967). In other words, if the independent variables gathered on electricians, welders, and auto mechanics were the nine Minnesota Vocational Interest Inventory homogeneous scales, the technique would attempt to derive a set of equations that would maximize the differences between the three groups on the basis of the MVII data. The equations calculated during the process are called discriminant functions, and the scores that are obtained by inserting a given individual's scores on the original variables into the equations are called discriminant scores. One can think of the process as one of deriving equations that will result in being able to calculate discriminant scores for individuals that would result in the greatest differences between the scores of those people who are members of the different populations.

If the differences obtained from the above process are significant and meaningful, such information can be useful in the counseling process. Counselors could calculate the discriminant scores for individuals and, based upon the scores obtained, they could compare the individuals' scores with the scores of individuals that are known to be successful in the various occupations. The assumption is that the more similar a particular individual's scores are to those of members of a successful group, the more likely he is to be successful. (For a discussion of the contrast between this approach and that of predicting the group in which an individual might maximally perform, see Nunnaly, 1959; Rulon, 1967; Tiedeman, 1951.)

Usually there is more than one discriminant function that is meaningfully interpretable from any analysis. Throughout this study, only the two most significant functions derived from the analyses were reported. Two were selected because in most instances the first two functions account collectively for a large proportion of the variance attributable to the data and operationally it is possible to plot two scores on a graph on a flat surface. An example of such a plot can be found in Figure 4.

The plots, such as the one shown in Figure 4, were derived as follows: A discriminant analysis was conducted using a particular instrument to differentiate among groups of individuals that were defined as successful in different occupations. The analysis resulted in two or more significant discriminant equations or functions. The two functions accounting for the greatest amount of variance were then used to calculate the discriminant scores for all of the people in each group. The mean or average discriminant score of all of the people in a given group on a given function was defined as the centroid on that function. Centroids were then plotted on a graph similar to that shown in Figure 4.[2]

Function 1 was the function accounting for the greatest amount of variance, and was represented by the X-axis, or the horizontal axis; function 2 was the function accounting for the second greatest amount of variance and was represented by the Y-axis, or vertical axis. The centroids for a given group on function 1

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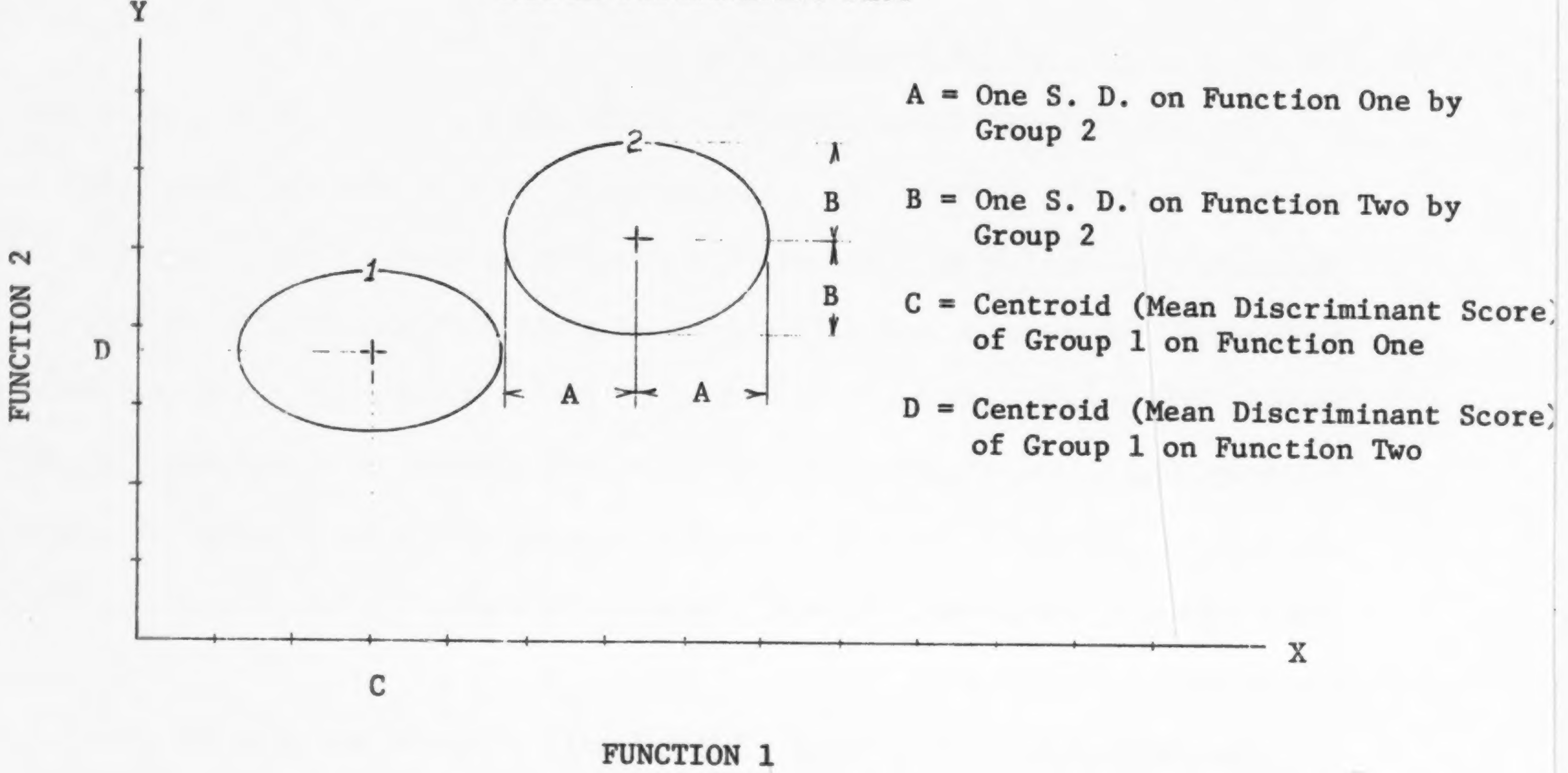
[2] Although the discriminant functions derived through discriminant analysis are orthogonal for the entire group on which the analysis was conducted, it is possible that the discriminant functions are not orthogonal for each of the sub-groups within the analysis. The figures presented in this publication were drawn making the assumption that the discriminant functions plotted were in fact orthogonal for each of the sub-groups within the analysis. In other words, it is assumed that the correlation between the scores derived from the two functions is zero within each of the sub-groups in the analysis as well as within the total analysis.

FIGURE 4

SAMPLE DISCRIMINANT PLOT



A = One S. D. on Function One by Group 2

B = One S. D. on Function Two by Group 2

C = Centroid (Mean Discriminant Score) of Group 1 on Function One

D = Centroid (Mean Discriminant Score) of Group 1 on Function Two

and 2 were plotted and the intersection of these two centroids determined the center of that group on the bivariate plot. Standard deviations of the discriminant scores around the centroid for each group were calculated on function 1 and function 2. The ellipse which encircles the centroid of a given group was plotted such that the distances from the centroid to the top of the ellipse and to the bottom of the ellipse were each equivalent to one standard deviation on the second function discriminant scores. The width of the ellipse was determined by plotting one standard deviation to the left and one standard deviation to the right of the centroid for the given group using the first discriminant function standard deviation for members of that group. It is hypothesized that this ellipse includes approximately forty percent of the individuals who were defined as successful in the occupation. In other words, if one took the scores of each individual included in the group on the instrument in question and calculated both his discriminant function scores on function 1 and function 2 and plotted them on the plot as shown in Figure 4, the discriminant function scores of forty percent of the members of the group would intersect within the ellipse.

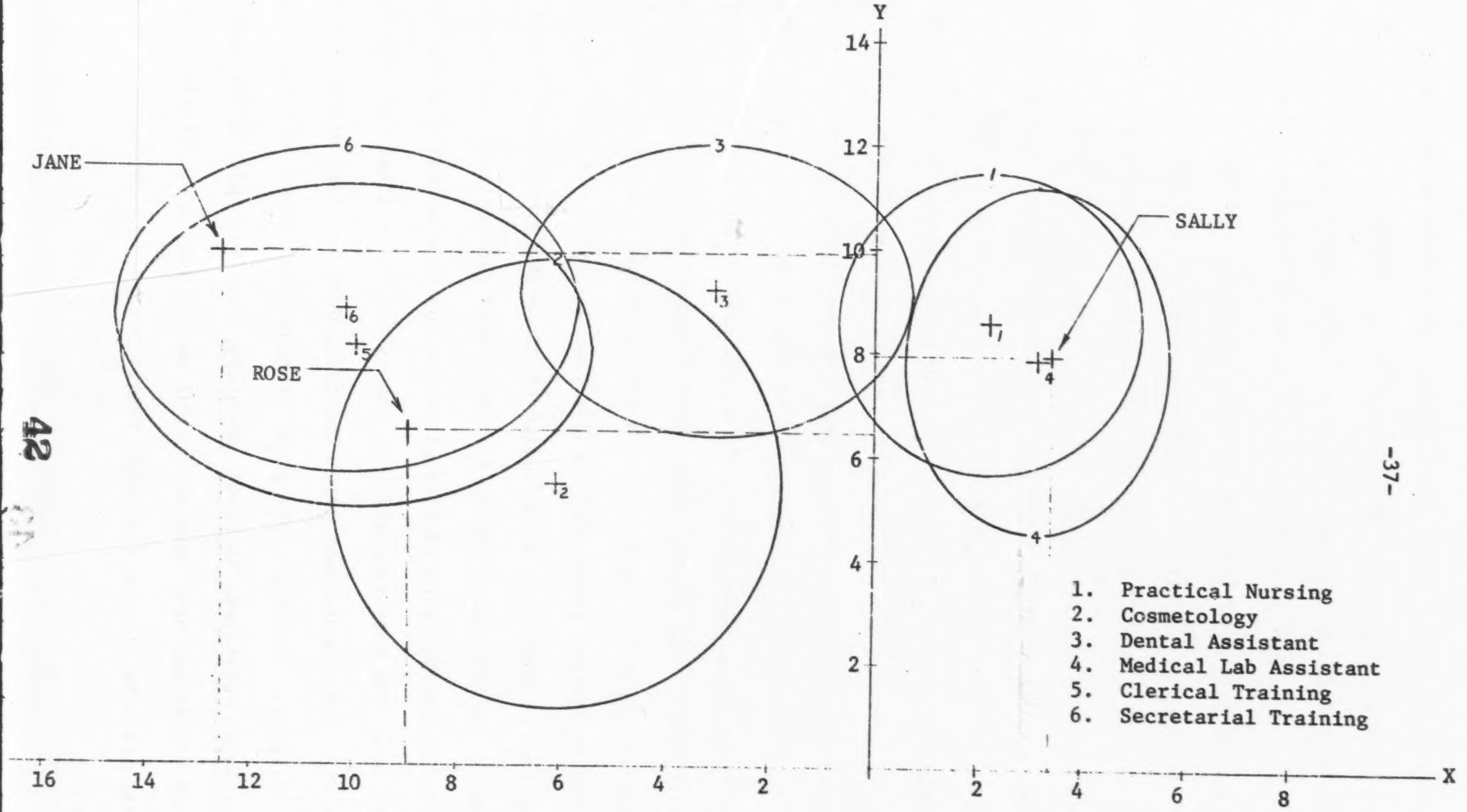
Use of the Discriminant Function Data

The discriminant function profile plots are a useful tool to counselors who wish to assist students in selecting among alternative vocational training programs. The method weighs each of the variables used to try to predict the differences between the groups in terms of their ability to differentiate between the groups, and takes into account the relationships among the variables. In other words, the discriminant functions are derived in such a way that if one were to calculate individual student discriminant scores using the discriminant function equations, the most important elements of the student's test scores will be utilized.

The following is an example of how female students who wish to select among alternative vocational programs might be assisted in making a choice through the use of the discriminant analysis data. In this example, we will assume that the instrument being used by the school is the Minnesota Vocational Interest Inventory and that the vocational programs which are of interest to the students are (1) practical nursing, (2) cosmetology, (3) dental assistant training, (4) medical lab assistant training, (5) clerical training, and (6) secretarial training. Figure 5 is a graph derived from actual scores of graduates of Minnesota Area Vocational-Technical schools who were successful employees in the six occupations listed. Upon inquiring about any of these programs, students would be asked to take the Minnesota Vocational Interest Inventory (MVII). The scores on the nine homogeneous scales of the MVII would be obtained for each of the students that took the inventory. The nine homogeneous scales obtained for the MVII for each student would be used to calculate discriminant score 1 and discriminant score 2 for each student.

FIGURE 5

PLOT OF THE FEMALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MVII SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: (-.2734)(H-1) + .5663(H-2) + (-.6973)(H-3) + (-.1874)(H-4) + .0009(H-5) + (-.0975)(H-6) + (-.0054)(H-7) + (-.2296)(H-8) + (-.1449)(H-9)

Y = FUNCTION 2: (-.5370)(H-1) + .5221(H-2) + .4961(H-3) + .0037(H-4) + (-.3414)(H-5) + (-.1529)(H-6) + .1425(H-7) + .0788(H-8) + .1625(H-9)

Let us assume that three girls come to the counselor for counseling in terms of vocational programs available to them. The counselor asks them to take the MVII and obtains their homogeneous key scores. He then takes each of the girls' scores and proceeds to calculate their function 1 and function 2 scores according to the function equations indicated in Figure 5. He would accomplish this as follows. He would take each of Jane's scores on the homogeneous keys of the MVII and multiply it by the appropriate multiplier as indicated in the equation for function 1. In other words, he would take Jane's scale H-1 score and multiply it by -.2734 and add that to Jane's H-2 scale score multiplied by .5663 and add that to Jane's H-3 scale score multiplied by -.6973, etc., until he had multiplied each of Jane's nine scores by the appropriate weight for function 1. The sum of the products obtained when each score is multiplied by its proper weight is Jane's score on discriminant function 1. (Table 18 illustrates the calculation for the three girls in this example.) The counselor would then take Jane's scores and do the same thing for function 2 by multiplying each of her scores by the appropriate weight and deriving a discriminant score for function 2. Jane's function 1 score would then be plotted along the horizontal X-axis and her function 2 score would then be plotted along the vertical Y-axis. The intersection of these two plots would locate Jane on the graph. In this case Jane is located within the ellipses that include 40% of the graduates who were successful on the job in clerical training and 40% of the graduates who were successful on the job in secretarial training (see Figure 5). Her discriminant score intersect does not fall within any of the other ellipses. Therefore, one might conclude that based on information from the Minnesota Vocational Interest Inventory, Jane's interests are more like those of people who have been successful on the job in secretarial training and clerical training than in the other female occupations represented on the graph.

TABLE 18

CALCULATION OF INDIVIDUAL DISCRIMINANT SCORES

S	SCALE	SCORE	FUNCTION ONE WEIGHT	SCORE X FUNCTION ONE WEIGHTS	FUNCTION TWO WEIGHT	SCORE X FUNCTION TWO WEIGHTS
Jane	H-1	1	(-.2734)	-0.2734	(-.5370)	-0.5370
	H-2	6	(.5663)	+3.3978	(.5221)	3.1326
	H-3	18	(-.6973)	-12.5514	(.4961)	8.9298
	H-4	3	(-.1874)	-0.5622	(.0037)	0.0111
	H-5	8.0	(.0009)	+0.0072	(-.3414)	-2.7312
	H-6	5.0	(-.0975)	-0.4875	(-.1529)	-0.7645
	H-7	6.0	(-.0054)	-0.0324	(.1425)	0.8550
	H-8	7	(-.2296)	-1.6072	(.0788)	0.5516
	H-9	3.0	(-.1449)	-0.4347	(.1625)	0.4875
			Sum(Score X Weight)	-12.5438	Sum(Score X Weight)	+9.9349
Rose	H-1	2	(-.2734)	-0.5468	(-.5370)	-1.0740
	H-2	7	(.5663)	+3.9641	(.5221)	3.6547
	H-3	13	(-.6973)	-9.0649	(.4961)	6.4493
	H-4	3	(-.1874)	-0.5622	(.0037)	.0111
	H-5	10	(.0009)	.0090	(-.3414)	-3.4140
	H-6	6	(-.0975)	-0.5850	(-.1529)	-0.9174
	H-7	6	(-.0054)	-0.0324	(.1425)	.5550
	H-8	6	(-.2296)	-1.3776	(.0788)	.4728
	H-9	4	(-.1449)	-0.5796	(.1625)	0.6500
			Sum(Score X Weight)	-8.7754	Sum(Score X Weight)	6.3875
Sally	H-1	2	(-.2734)	-0.5468	(-.5370)	-1.0740
	H-2	17	(.5663)	+9.6271	(.5221)	8.8757
	H-3	5	(-.6973)	-3.4865	(.4961)	2.4805
	H-4	2	(-.1874)	-0.3748	(.0037)	.0074
	H-5	10	(.0009)	0.0090	(-.3414)	-3.4140
	H-6	5	(-.0975)	-0.4875	(-.1529)	-0.7645
	H-7	7	(-.0054)	-0.0378	(.1425)	0.9975
	H-8	4	(-.2296)	-0.9184	(.0788)	0.3152
	H-9	3	(-.1449)	-0.4347	(.1625)	0.4875
			Sum(Score X Weight)	3.3496	Sum(Score X Weight)	7.9443

Rose's discriminant function 1 and discriminant function 2 scores would be calculated similarly and plotted on the profile. Rose's intersect falls within secretarial, clerical, and cosmetology ellipses. Relatively, her score intersect is closer to the centers of the secretarial-clerical groups than it is to the center of the cosmetology group, but the differences are not great. It might be well to advise Rose that her interests are more like those of the secretarial, clerical and cosmetology groups who went through vocational programs and were successful on the job. Sally's discriminant function 1 and 2 scores would be calculated similarly and plotted on the graph. Sally's intersect falls within the ellipses of the practical nursing and the medical lab assistant groups. It might be well to advise Sally that her interests are more like those of practical nurses and medical lab assistants who have gone through vocational programs and have become successful on the job than they are to the interests of the other groups. Also, her interests are more like those of medical lab assistants than practical nurses because her intersect falls closer to the center of the medical lab assistant group than to the center of the practical nursing group.

The example given here was relative to interest inventory information obtained from the Minnesota Vocational Interest Inventory. The scores for these girls could also be similarly plotted on the graphs that have been prepared for the other instruments if scores were available on the other instruments. Therefore, the students or potential students could view how similar their scores are to the scores of people in fields of interest who have graduated and have become successfully employed. This information provides the student with additional information in making occupational choices.

Interpretation of Functions

The information gained through the construction of two-dimensional plots of occupational groups or curricula and the placement of individual counselees on the graph thus produced may be supplemented by the interpretation of the constructs underlying the discriminant functions utilized in the graphs.

Although it is not always possible to attach a simple label to the psychological construct underlying a function, it is generally informative to examine both the weights applied to the original variables to form the function and the correlations of the function with the original variables. An interpretation of a discriminant function will give the counselor and counselee a feeling for "how" the occupations or curricula being considered differ (see Tatsuoka, 1970).

The following example is an interpretation of the first two functions from the analysis of MVII scores for females in the employed related population. (This is the same analysis used previously for the placement of three hypothetical students.) The data reported in Table 19 was taken from Table 29 and lists only those MVII scales with the highest weights and correlations for the first two functions. The interpretation of any function should include the consideration of all of the original variables, but in the case where some variables clearly have higher weights, consideration of only those variables usually provides a reasonable definition of the construct underlying the function.

The first function in this analysis accounted for 93.87% of the variance accounted for by the analysis and may be interpreted as reflecting interests in health service in the positive direction and office work in the negative direction. Examination of Figure 5 tends to corroborate this interpretation with clerical training (5) and secretarial training (6) falling at the low (highest negative) end of the function and practical nursing (1) and medical lab assistant (4) at the opposite or positive end of the function.

TABLE 19

SELECTED ENTRIES FROM TABLE 29 USED IN THE INTERPRETATION OF THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MVII SCORES FOR THE FEMALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

MVII SCALE	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH ORIGINAL SCALES	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH ORIGINAL SCALES
H-1 MECHANICAL			-.5370	-.5952
H-2 HEALTH SCIENCES	.5663	-.9286	.5221	.3072
H-3 OFFICE WORK	-.6973	-.9021	.4961	.3779
H-5 FOOD SERVICE			-.3414	-.4145

The second function accounted for an additional 4.10% of the variance accounted for by this analysis and can be interpreted as representing interest in both health services and office work in the positive direction and mechanical and food service interests in the negative direction. Since the first function had already accounted for most of the variance accounted for in the analysis, discrimination along this function is not as clear-cut as along the first function. Cosmetology (2) was discriminated from the other five occupations by its lower placement on function two.

One will not always find a one-to-one correspondence in the rank order of variables on both weights and correlations. In the event that two or more scales of a test instrument tend to measure the same trait or characteristic (are intercorrelated) it may be found that one or more of the variables will have a high correlation and a low weight. This can be accounted for by the fact that once that particular variance that differentiates between groups has been accounted for by the relatively heavy weighting of the first scale, later scales that measure some of the same variance will not logically also be highly weighted. If all the scales of a test instrument were independent (measured a single and separate trait or characteristic), one would find a correspondence in the rank-order of scales on both weights and correlations.

Results

The results are organized in four major sections, each section presenting the findings for one of the four instruments used in this part of the study. Each of these four sections contains six analyses: (1) Graduates, Male Grouping, (2) Employed Related, Male Grouping, (3) Graduates, Female Grouping, (4) Employed Related, Female Grouping, (5) Graduates, Combined Grouping, and (6) Employed Related, Combined Grouping.

Results Related to the *General Aptitude Test Battery* (GATB) Male Occupational Grouping, Graduate Population.

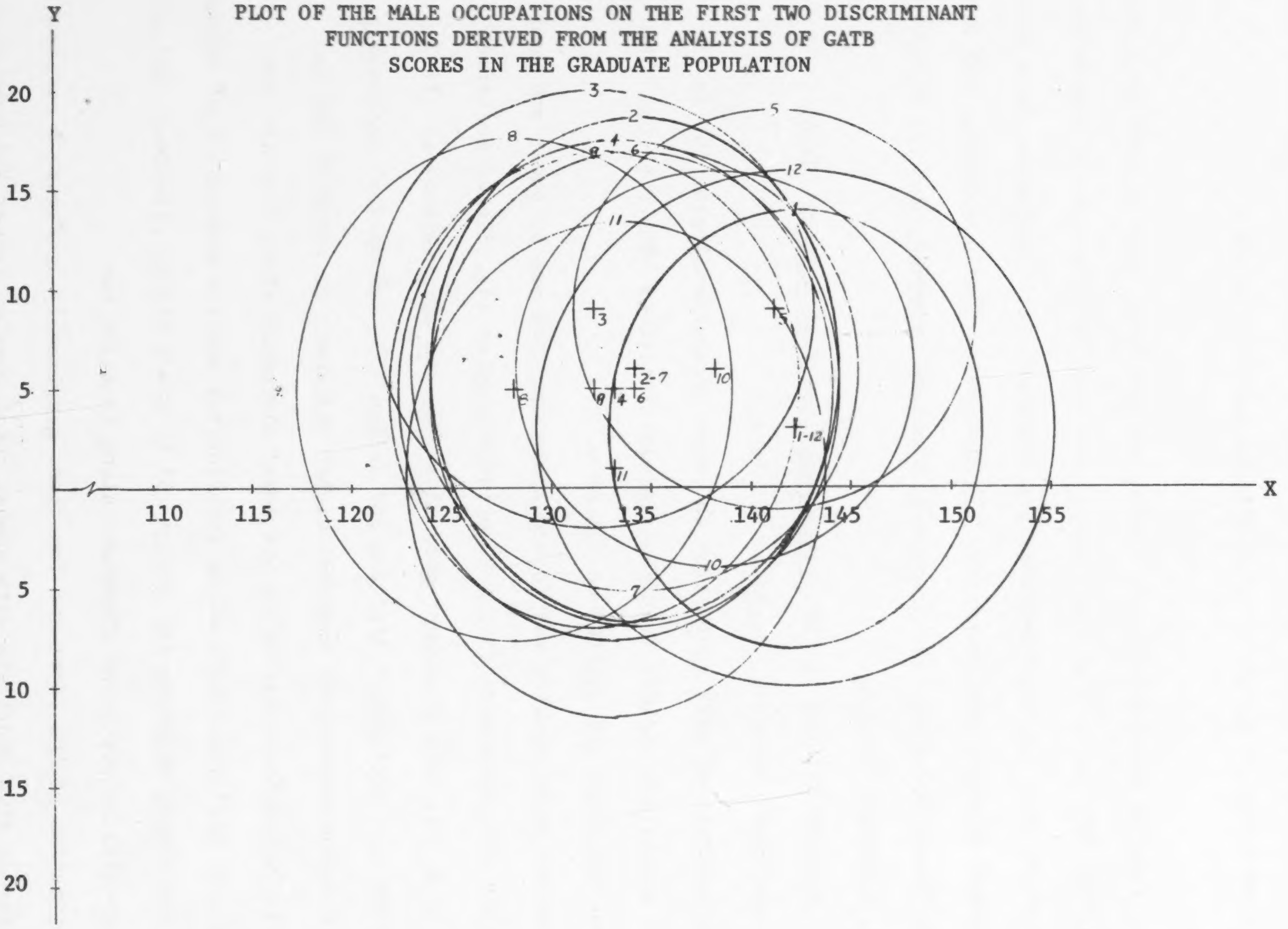
The analysis of GATB scores for the male occupational grouping in the graduate population yielded four discriminant functions with $P < .05$. The first two functions are plotted as Figure 6.

A rather tight cluster was formed along function one by power and home electricity (2), carpentry (3), automotive mechanics (4), diesel mechanics (6), machine shop (7), farm equipment mechanics (9), and agri-technology (11). Electronics (1), mechanical drafting and design (5), and optical technology (12) were differentiated by somewhat higher placement on function one and welding (8) was differentiated by its lower placement along function one.

Clearest differentiation along function two was the separation of carpentry (3) and mechanical drafting and design (5) by their higher placement, and agri-technology (11) by its lower placement along function two.

Combination of the first two functions graphically in Figure 6 resulted in one cluster of five curricula with almost total overlap [power and home electricity (2), automotive mechanics (4), diesel mechanics (6), machine shop (7),

FIGURE 6
PLOT OF THE MALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF GATB SCORES IN THE GRADUATE POPULATION



X = FUNCTION 1: $(-.3211)(G) + .7585(V) + .4158(N) + .3554(S) + (-.0819)(P) + .1032(Q) + .0707(K)$

Y = FUNCTION 2: $.0234(G) + (-.7334)(V) + .0820(N) + .6126(S) + .1336(P) + (-.2430)(Q) + .0509(K)$

TABLE 20

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF GATB SCORES FOR THE MALE OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
G - Intelligence	-.3211	.8825	.0234	.1405
V - Verbal Aptitude	.7585	.8505	-.7334	-.4043
N - Numerical Aptitude	.4158	.6946	.0820	-.0006
S - Spatial Aptitude	.3554	.5899	.6126	.7504
P - Form Perception	-.0819	.4080	.1336	.3318
Q - Clerical Perception	.1032	.4955	-.2430	-.0537
K - Motor Coordination	.0707	.3053	.0509	.0108

and farm equipment mechanics (9)]. The remaining seven curricula were at least partially discriminated from this central cluster.

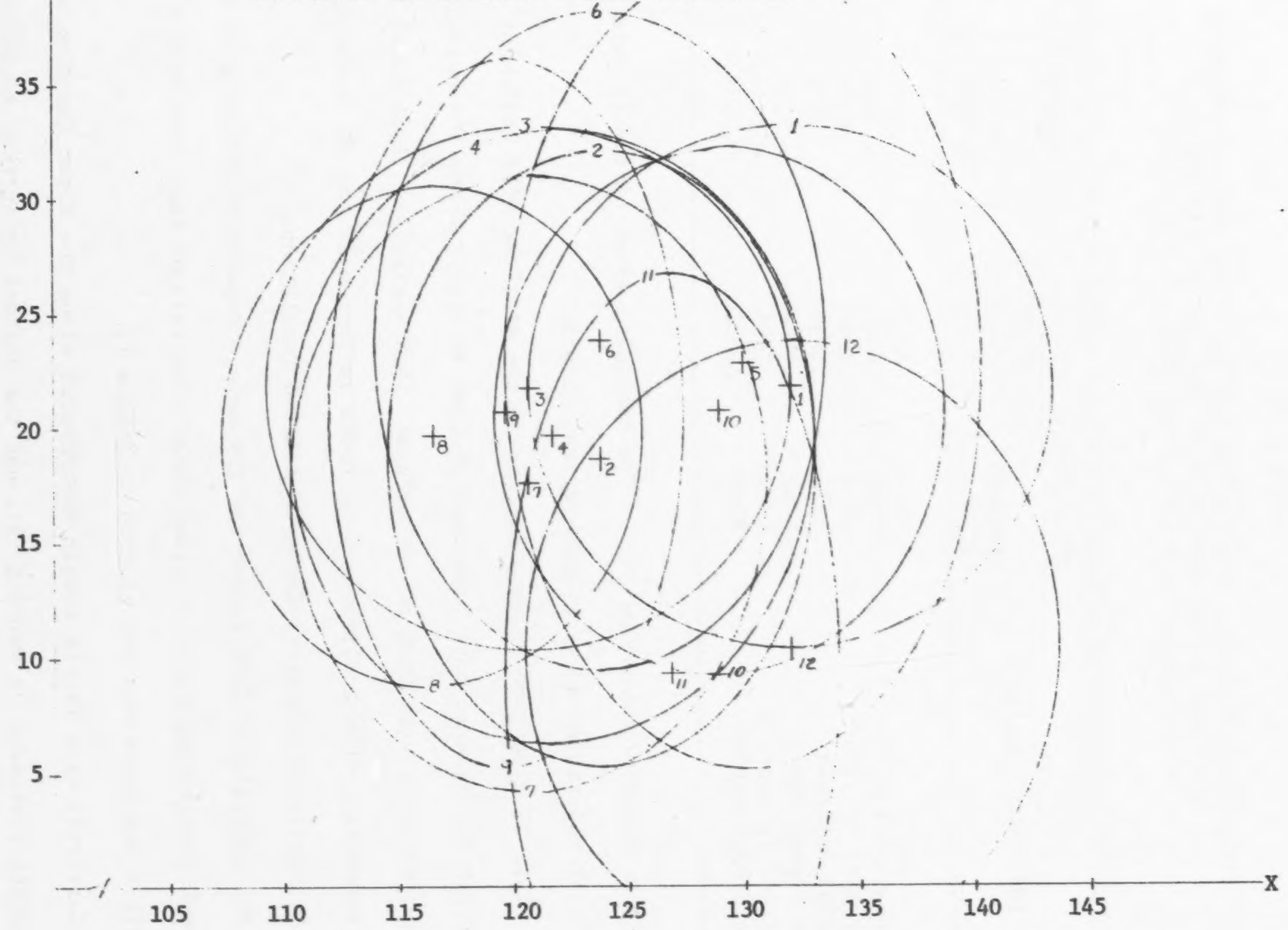
Table 20 gives the weights applied to the original GATB variables to yield the first two discriminant functions plotted in Figure 6 and the correlations of the functions with each of the original GATB variables. Additional information concerning this analysis may be found in Tables 1D and 1E in the Appendices.

Male Occupational Grouping, Employed Related Population.

The analysis of GATB scores for the male occupational grouping in the employed related population yielded three discriminant functions with $P < .05$. The first two functions are plotted as Figure 7.

Curricula were fairly evenly distributed along the first function with the lowest placement by welding (8), and the highest by optical technology (12) and electronics (1). Agri-technology (11) and optical technology (12) were discriminated from the other curricula by their lower placement along function two.

FIGURE 7
PLOT OF THE MALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF GATB SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: (-.2275)(G) + .9124(V) + .2744(N) + .1336(S) + (-.0584)(P) + .0858(Q) + .1085(K)

Y = FUNCTION 2: .4794(G) + (-.3746)(V) + (-.1296)(N) + .6230(S) + .0325(P) + (-.4634)(Q) + (-.0957)(K)

TABLE 21

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF GATB SCORES FOR THE MALE OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
G - Intelligence	-.2275	.7892	.4794	.4109
V - Verbal Aptitude	.9124	.9475	-.3746	-.0020
N - Numerical Aptitude	.2744	.6065	-.1296	.0382
S - Spatial Aptitude	.1336	.3229	.6230	.8566
P - Form Perception	-.0584	.3194	.0325	.1076
Q - Clerical Perception	.0858	.4350	-.4634	-.2758
K - Motor Coordination	.1085	.3609	-.0957	-.1885

Combination of the first two functions graphically in Figure 7 resulted in three clusters of curricula. The first cluster was composed of power and home electricity (2), carpentry (3), automotive mechanics (4), machine shop (7), welding (8), and farm equipment mechanics (9). The second cluster was composed of electronics (1), mechanical drafting and design (5), and aircraft mechanics (10). The third cluster was composed of agri-technology (11) and optical technology (12).

Table 21 gives the weights applied to the original GATB variables to yield the first two discriminant functions plotted in Figure 7 and the correlations of these functions with each of the original GATB variables. Additional information concerning this analysis may be found in Tables 2D and 2E in the Appendices.

Female Occupational Grouping, Graduate Population.

The analysis of GATB scores for the female occupational grouping in the graduate population yielded four discriminant functions with $P < .05$. The

TABLE 22

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF GATB SCORES FOR THE FEMALE OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
G - Intelligence	.1957	.8205	.0084	.2174
V - Verbal Aptitude	.8555	.8807	.5503	.3782
N - Numerical Aptitude	.3359	.6661	-.5846	-.3019
S - Spatial Aptitude	.0518	.2997	.2404	.5342
P - Form Perception	-.2256	.1263	.4308	.4885
Q - Clerical Perception	.0832	.3540	-.0478	.0379
K - Motor Coordination	.2377	.4143	-.3312	-.3670

first two functions are plotted as Figure 8.

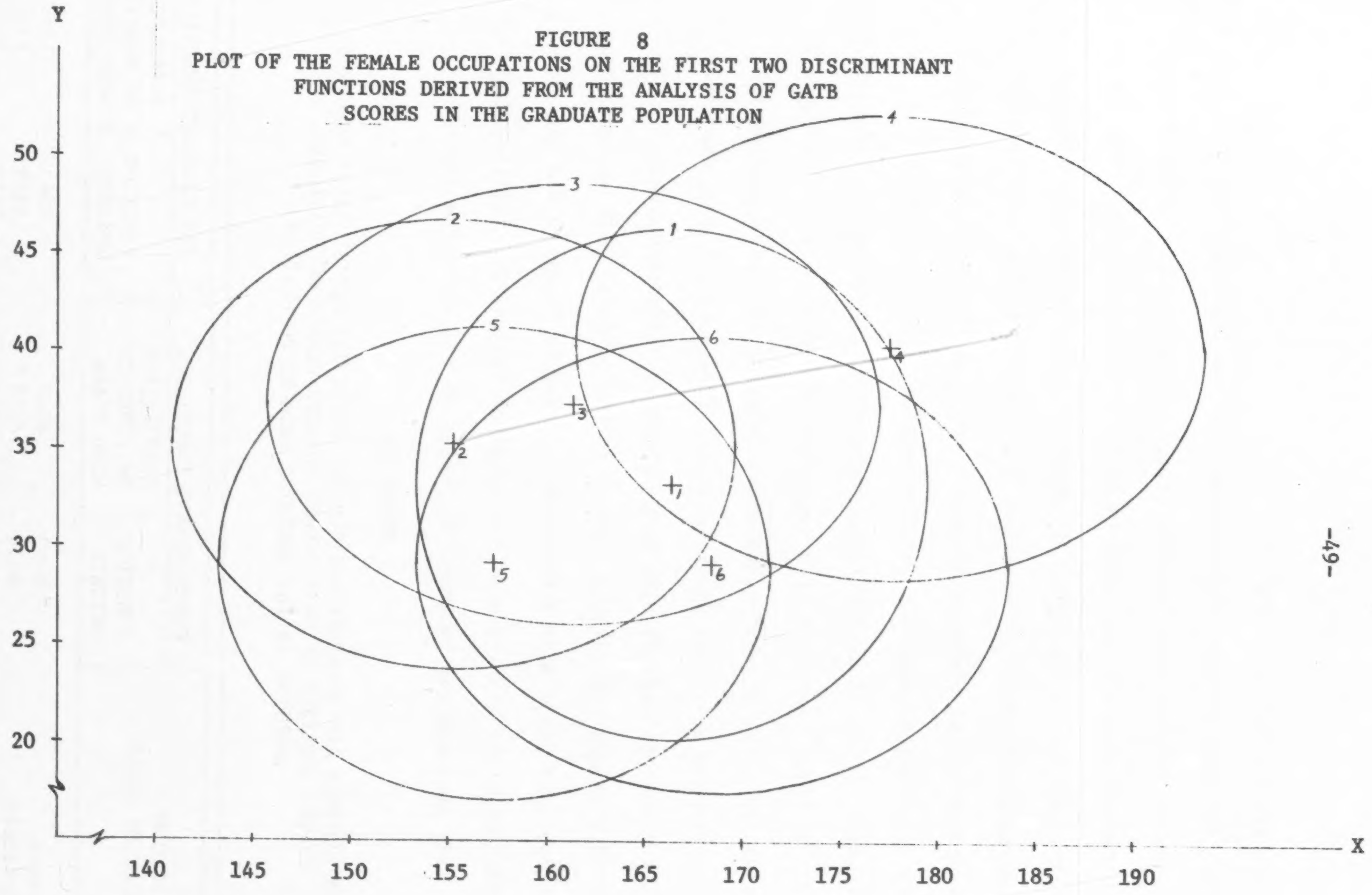
Function one most clearly discriminates medical lab assistant (4) from the other five curricula by its higher placement along the function. Function two did not clearly discriminate among the six curricula although maximum separation was between a cluster composed of clerical training (5), and secretarial training (6), and the single curriculum medical lab assistant (4). Combination of the first two functions graphically in Figure 8 showed the greatest separation to be between medical lab assistant (4) and clerical training (5).

Table 22 presents the weights applied to the original GATB variables to yield the first two discriminant functions and the correlations of these functions with each of the original GATB variables. Additional information concerning this analysis may be found in Tables 3D and 3E in the Appendices.

Female Occupational Grouping, Employed Related Population.

Analysis of GATB scores for the female occupational grouping in the employed related population yielded four discriminant functions with $P < .05$. The first

FIGURE 8
PLOT OF THE FEMALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF GATB SCORES IN THE GRADUATE POPULATION



X = FUNCTION 1: .1957(G) + .8555(V) + .3359(N) + .0518(S) + (-.2256)(P) + .0832(Q) + .2377(K)

Y = FUNCTION 2: .0084(G) + .5503(V) + (-.5846)(N) + .2404(S) + .4308(P) + (-.0478)(Q) + (-.3312)(K) two functions are plotted in Figure 9.

Function one most clearly separates medical lab assistant (4) with its high placement on the function from the other five curricula. Discrimination on function two was between two clusters of three curricula each. The first cluster, characterized by its lower placement on function two was composed of practical nursing (1), clerical training (5), and secretarial training (6). The second cluster, with higher placement on the function, was composed of cosmetology (2), dental assistant (3), and medical lab assistant (4).

Combination of the first two functions graphically in Figure 9 resulted in a cluster of three curricula with considerable overlap: practical nursing (1), clerical training (5), and secretarial training (6). The medical lab assistant curriculum group (4) was relatively differentiated from the other curricula with cosmetology (2) also being somewhat differentiated.

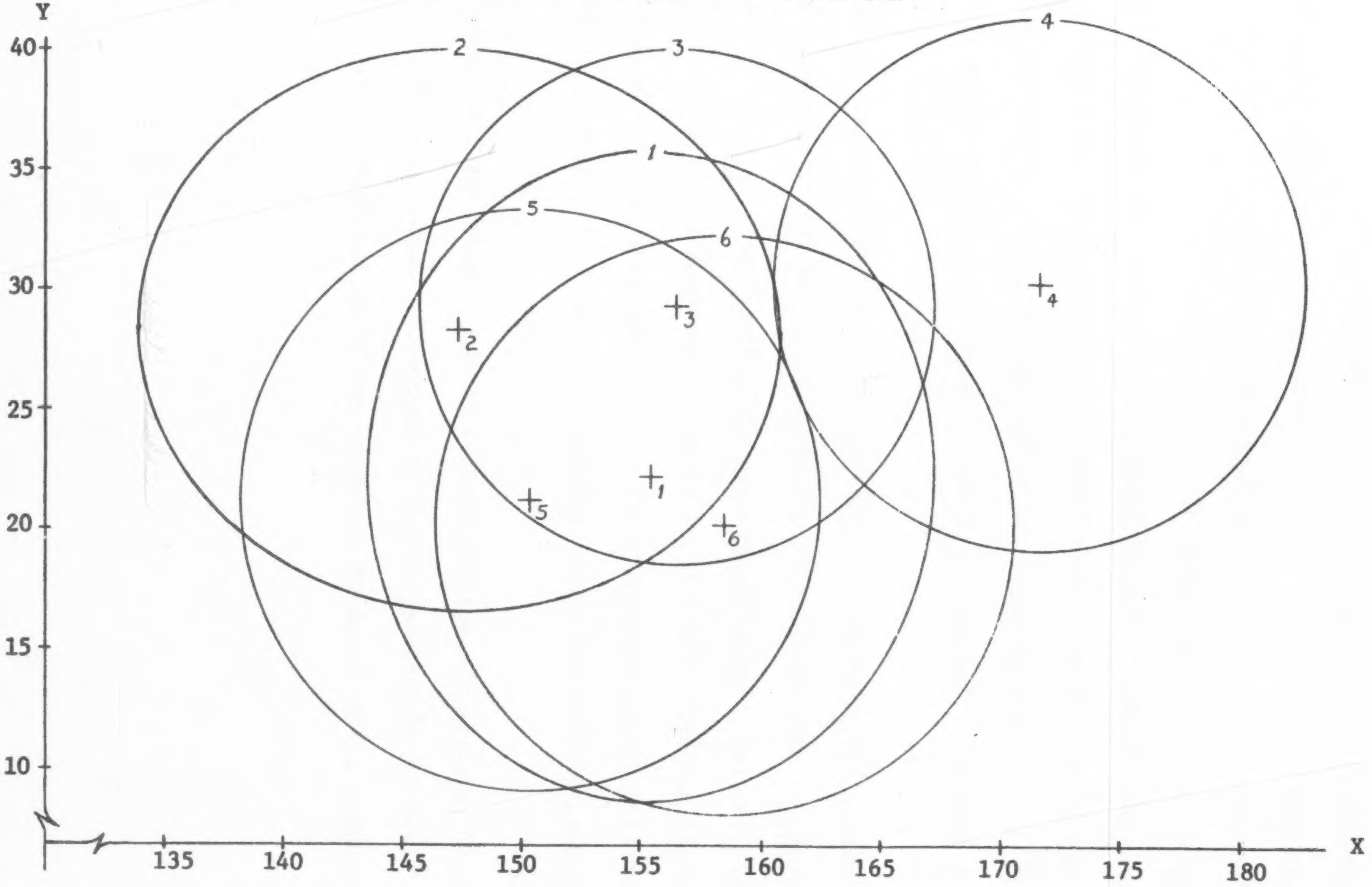
Table 23 presents the weights applied to the original GATB variables to yield the first two discriminant functions plotted in Figure 9 and the correlations of the functions with each of the original variables. Additional information on this analysis may be found in Tables 4D and 4E in the Appendices.

TABLE 23

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF GATB SCORES FOR THE FEMALE OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
G - Intelligence	-.0969	.8565	-.1343	.1493
V - Verbal Aptitude	.8334	.8785	.4819	.2548
N - Numerical Aptitude	.4686	.6916	-.5672	-.3625
S - Spatial Aptitude	.2026	.4053	.3475	.5685
P - Form Perception	-.1269	.1989	.4527	.5010
Q - Clerical Perception	.0181	.3303	-.0889	-.0201
K - Motor Coordination	.1376	.3313	-.3072	-.3608

FIGURE 9
PLOT OF THE FEMALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF GATB SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: (-.0969)(G) + .8334(V) + .4686(N) + .2026(S) + (-.1269)(P) + .0181(Q) + .1376(K)

Y = FUNCTION 2: (-.1343)(G) + .4819(V) + (-.5672)(N) + .3475(S) + .4527(P) + (-.0889)(Q) + (-.3072)(K)

Combined Occupational Grouping, Graduate Population.

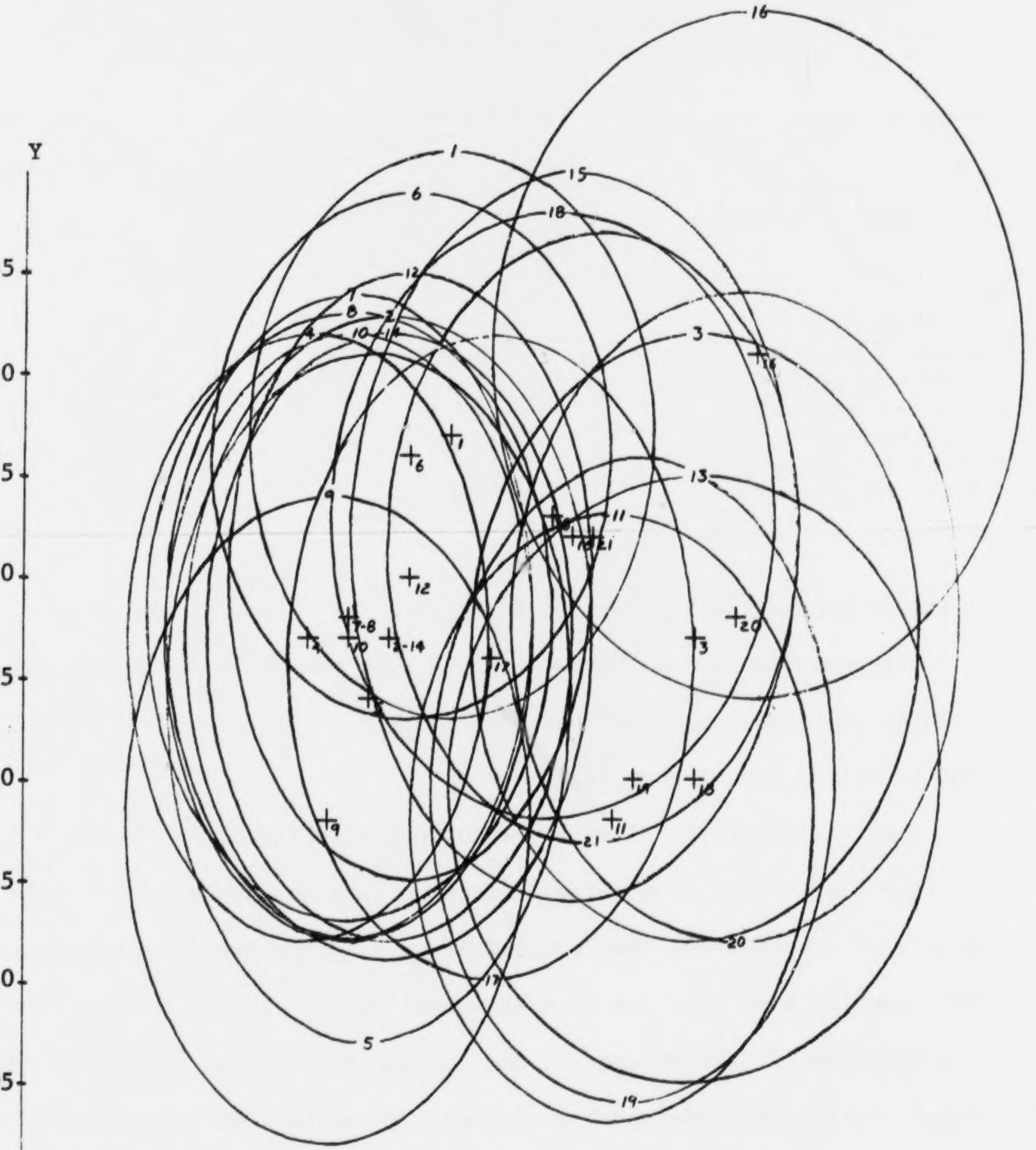
The analysis of GATB scores for the combined occupational grouping in the graduate population yielded six discriminant functions with $P < .05$. The first two functions are plotted as Figure 10.

Plotting the two functions graphically resulted in five clusters of occupations. The first cluster included seven occupations which had a high degree of overlap: power and home electricity (2), carpentry (4), automotive mechanics (5), diesel mechanics (7), machine shop (8), farm equipment mechanics (10), and agri-technology (14). The second cluster was composed of optical technology (15), accounting (18), and data processing (21). The third cluster was practical nursing (3), and secretarial training (20). The fourth cluster showed considerable overlap between cosmetology (11), dental assistant (13), and clerical training (19). The fifth cluster was composed of electronics (1), and mechanical drafting and design (6). One occupation, medical lab assistant (16) was separated from the other occupations by its high placement on both functions.

Table 24 presents the weights applied to the original GATB variable to yield the first two functions plotted in Figure 10. Additional information on this analysis may be found in Tables 5D and 5E in the Appendices.

FIGURE 10

PLOT OF THE COMBINED OCCUPATIONS IN THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF GATB SCORES IN THE GRADUATE POPULATION



$$Y = \text{FUNCTION 1: } (-.5047)(G) + .6884(V) + .1683(N) + (-.1280)(S) + .0343(P) + .4270(Q) + .2077(K)$$

$$Y = \text{FUNCTION 2: } .3080(G) + .4150(V) + .6801(N) + .3774(S) + (-.2267)(P) + (-.2663)(Q) + (-.0754)(K)$$

TABLE 24

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF GATB SCORES FOR THE COMBINED OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

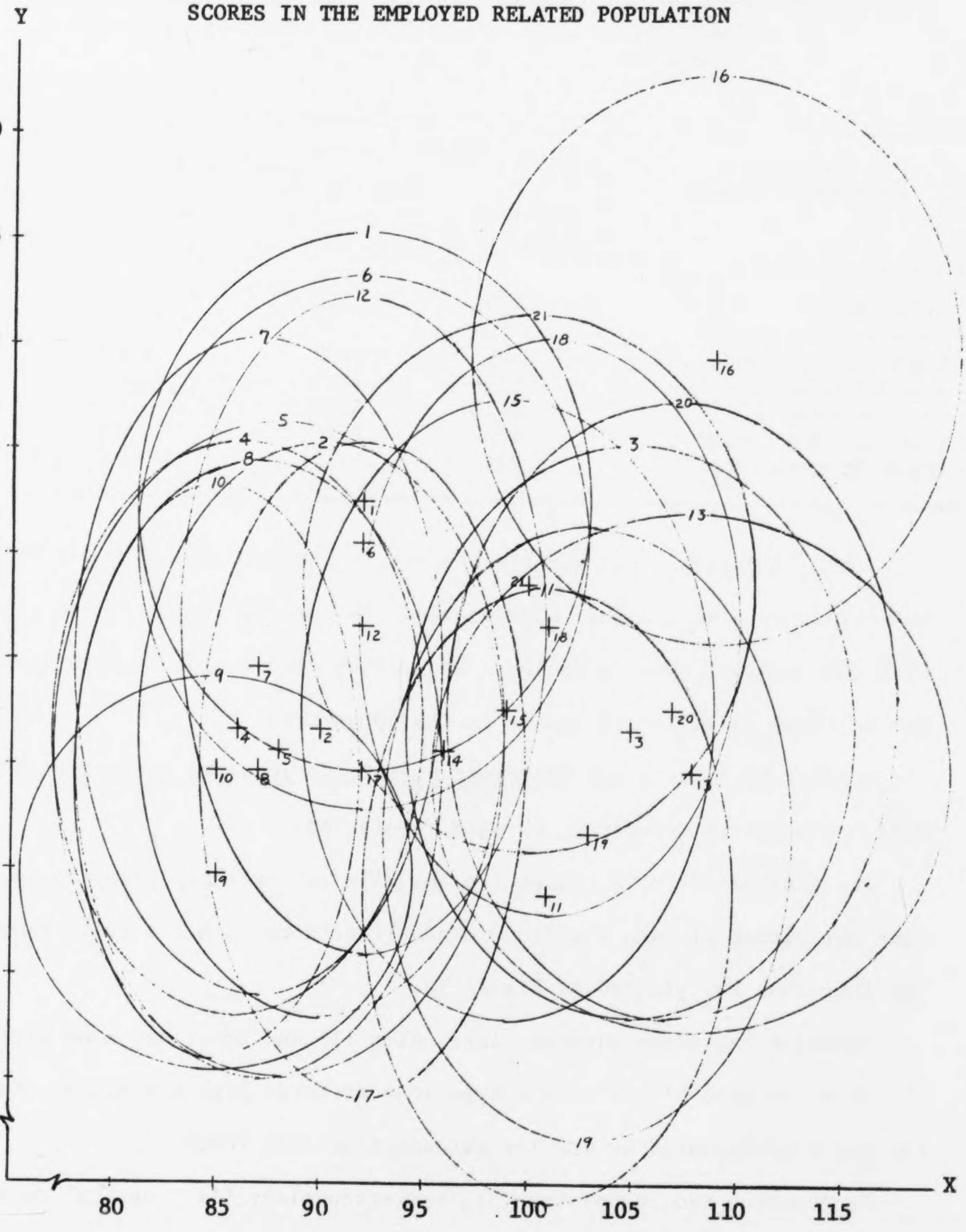
ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
G - Intelligence	-.5047	.2220	.3080	.9044
V - Verbal Aptitude	.6884	.5985	.4150	.6080
N - Numerical Aptitude	.1683	.3832	.6801	.7258
S - Spatial Aptitude	-.1280	-.2487	.3774	.5711
P - Form Perception	.0343	.4321	-.2267	.0786
Q - Clerical Perception	.4270	.7713	-.2663	.0594
K - Motor Coordination	.2077	.6602	-.0754	-.0131

Combined Occupational Grouping, Employed Related Population.

The analysis of GATB scores for the combined grouping in the employed related population yielded four discriminant functions with $P < .05$. The first two functions are plotted as Figure 11.

Combination of the first two functions graphically in Figure 11 resulted in five clusters of occupations with considerable overlap. The first cluster consisted of power and home electricity (2), carpentry (4), automotive mechanics (5), machine shop (8), and farm equipment mechanics (10). The second cluster was composed of electronics (1) and mechanical drafting and design (6). The third cluster was made up of practical nursing (3), dental assistant (13), and secretarial training (20). The fourth cluster was cosmetology (11) and clerical training (19), and the fifth cluster was composed of accounting (18) and data processing (21). One occupation, medical lab assistant (16), had little overlap with the other occupations and had higher placement on both functions.

FIGURE 11
PLOT OF THE COMBINED OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF GATB SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: (-.4909)(G) + .7198(V) + .2182(N) + (-.1526)(S) + .0714(P) + .3507(Q) + .2044(K)

Y = FUNCTION 2: .1531(G) + .5287(V) +. 5878(N) + .4525(S) + (-.1670)(P) + (-.3420)(Q) + (-.0431)(K)

TABLE 25

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF GATB SCORES FOR THE COMBINED OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
G - Intelligence	-.4909	.2540	.1531	.8806
V - Verbal Aptitude	.7198	.6254	.5287	.6264
N - Numerical Aptitude	.2182	.4208	.5878	.6248
S - Spatial Aptitude	-.1526	-.2716	.4525	.6228
P - Form Perception	.0714	.4339	-.1670	.0734
Q - Clerical Perception	.3507	.7373	-.3420	-.0406
K - Motor Coordination	.2044	.6415	-.0431	-.0221

Table 25 presents the weights applied to the original GATB scales to yield the first two discriminant functions and the correlations of these functions with the original GATB variables. Additional information on this analysis may be found in Tables 6D and 6E in the Appendices.

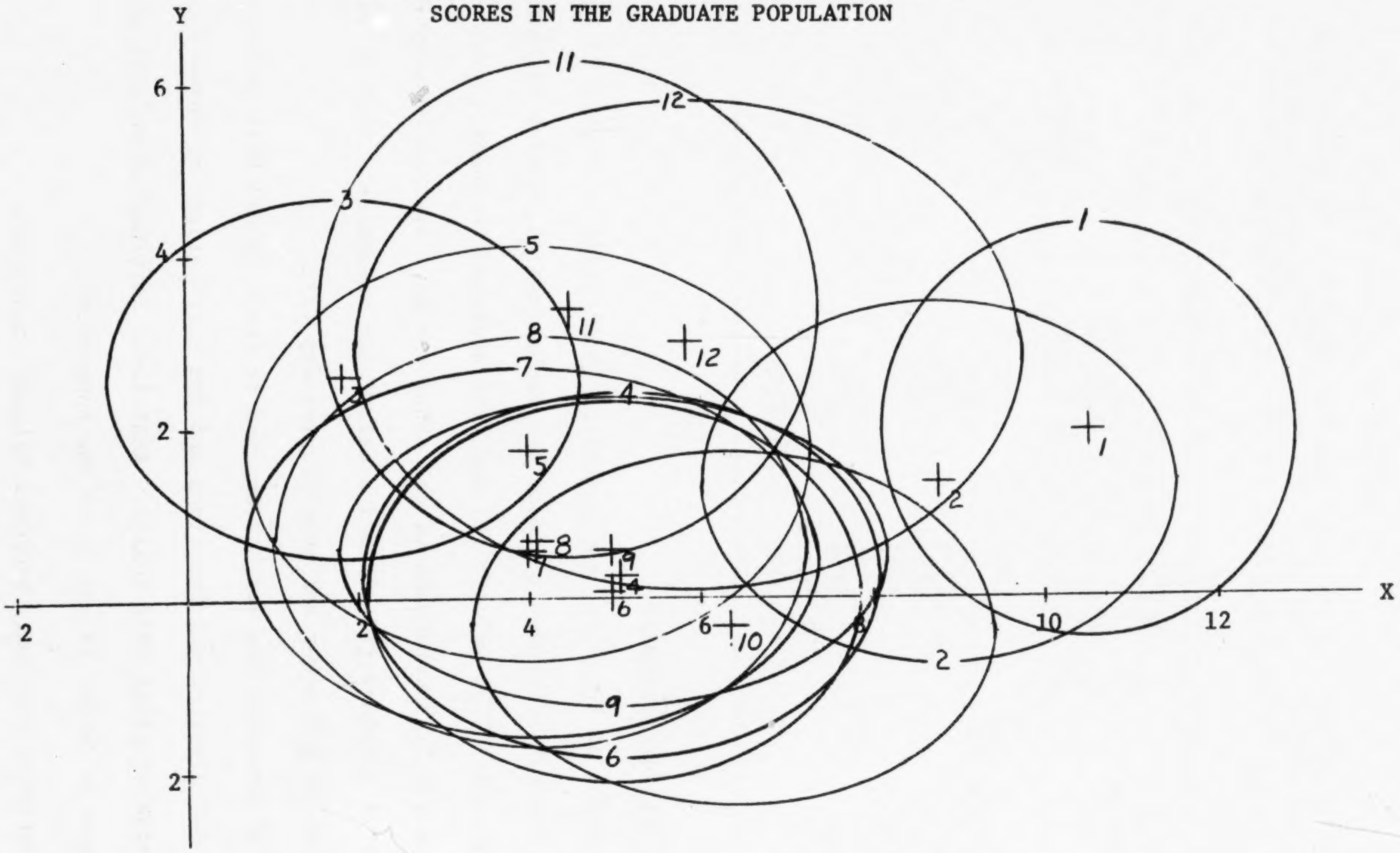
Results Related to the Minnesota Vocational Interest Inventory (MVII) Male Occupational Grouping, Graduate Population.

The analysis of MVII scores for the male occupational grouping in the graduate population yielded six discriminant functions with $P < .05$. The first two functions are plotted as Figure 12.

Function one discriminated electronics (1) and power and home electricity (2) from the rest of the male occupations by their high placement. Carpentry (3) was discriminated by its low placement on this function.

On function two, carpentry (3), agri-technology (11), optical technology (12), electronics (1), mechanical drafting and design (5), and power and home electricity (2) were discriminated from the other six occupations by their

FIGURE 12
PLOT OF THE MALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MVII SCORES IN THE GRADUATE POPULATION



X = FUNCTION 1: (-.0597)(H-1) + .2510(H-2) + .1834(H-3) + .8671(H-4) + .0217(H-5) + (-.2785)(H-6) + .1648(H-7) + (-.1823)(H-8) + (-.0975)(H-9)

Y = FUNCTION 2: (-.4482)(H-1) + .2857(H-2) + .2157(H-3) + .4999(H-4) + (-.1229)(H-5) + .5881(H-6) + .0832(H-7) + .0180(H-8) + (-.1242)(H-9)

TABLE 26

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MVII SCORES FOR THE MALE OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
H-1 Mechanical	-.0597	.0880	-.4882	-.8173
H-2 Health Services	.2510	.2192	.2857	.4418
H-3 Office Work	.1834	-.0487	.2157	.6297
H-4 Electronics	.8671	.8812	.4999	-.2515
H-5 Food Service	.0217	-.0178	-.1229	.1126
H-6 Carpentry	-.2785	-.8345	.5881	.1832
H-7 Sales-Office	.1648	.1470	.0832	.5589
H-8 Clean Hands	-.1823	-.0806	.0180	.4522
H-9 Outdoors	-.0975	-.1249	-.1242	-.4301

relatively higher placement.

Combination of the first two functions graphically in Figure 12 revealed one large cluster composed of automotive mechanics (4), diesel mechanics (6), machine shop (7), welding (8) and farm equipment mechanics (9). Carpentry (3) was relatively independent of the other groups. Agri-technology (11) and optical technology (12) formed a relatively independent cluster as did electronics (1) and power and home electricity (2).

Table 26 presents the weights applied to the original MVII scales to yield the first two discriminant functions and the correlations of these functions with the nine original MVII scales. Additional information on this analysis may be found in Tables 7D and 7E in the Appendices.

Male Occupational Grouping, Employed Related Population.

The analysis of MVII scores for the male grouping in the employed related population yielded four discriminant functions with $P < .05$. The first two functions are plotted in Figure 13.

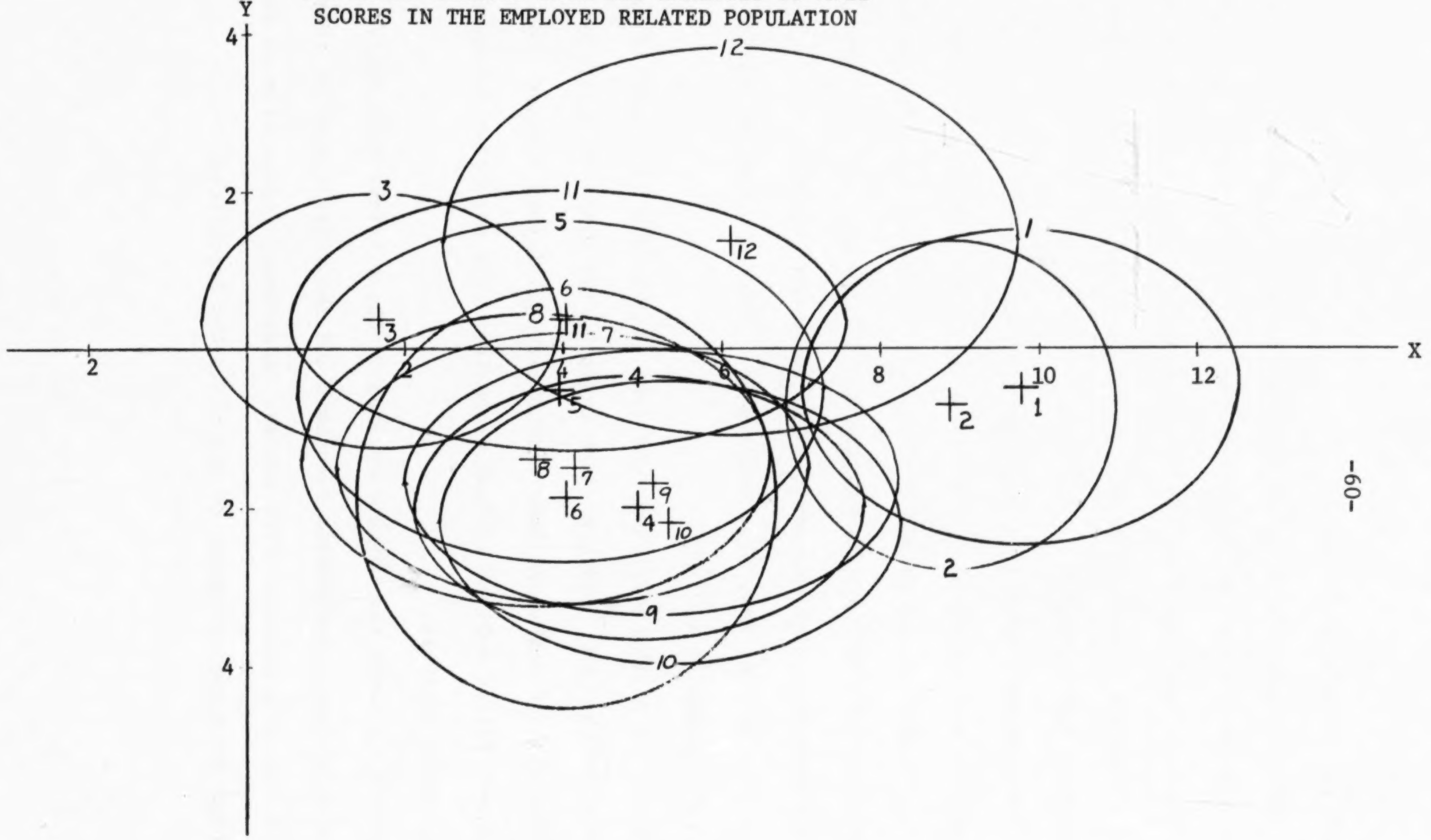
On function one, the greatest discriminantion was between a cluster composed of electronics (1) and power and home electricity (2) on the high end of the function, and carpentry (3) on the low end. The other nine occupations are fairly tightly clustered on this function, falling between the two extremes of electronics and carpentry.

On function two, optical technology (12) was discriminated in the positive direction and the remainder of the occupations were grouped into two clusters. Cluster one contained electronics (1), power and home electricity (2), carpentry (3), mechanical drafting and design (5), and agri-technology (11). The second cluster was composed of automotive mechanics (4), diesel mechanics (6), machine shop (7), welding (8), farm equipment mechanics (9), and aircraft mechanics (10).

Combination of the first two functions graphically in Figure 13 resulted in essentially the same clusters as on function two with the exception that electronics (1) and power and home electricity (2) formed a third cluster, and carpentry (3) as well as optical technology (12) were discriminated from the three basic clusters.

Table 27 presents the weights applied to the original MVII scales to yield the first two discriminant functions and the correlations of these functions with the nine original MVII scales. Additional information on this analysis may be found in Tables 8D and 8E in the Appendices.

FIGURE 13
PLOT OF THE MALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MVII SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: (-.1065)(H-1) + .1389(H-2) + .1764(H-3) + .8719(H-4) + .0801(H-5) + (-.2409)(H-6) + .2378(H-7) + (-.2342)(H-8) + (-.0464)(H-9)

Y = FUNCTION 2: (-.4707)(H-1) + .2414(H-2) + (-.0502)(H-3) + .4534(H-4) + (-.2093)(H-5) + .5820(H-6) + .2613(H-7) + (-.1755)(H-8) + (-.1745)(H-9)

TABLE 27

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MVII SCORES FOR THE MALE OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

ORIGINAL INSTRUMENT SCALES		DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
		FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
H-1	Mechanical	-.1065	.0433	-.4707	-.7346
H-2	Health Services	.1389	.2080	.2414	.4507
H-3	Office Work	-.1764	-.0807	-.0502	.3379
H-4	Electronics	.8719	.8882	.4534	-.2242
H-5	Food Service	.0801	.0535	-.2093	.0385
H-6	Carpentry	-.2409	-.8381	.5820	.2382
H-7	Sales-Office	.2378	.1603	.2613	.6167
H-8	Clean Hands	-.2342	-.1261	-.1755	.2204
H-9	Outdoors	-.0464	-.1363	-.1745	-.3518

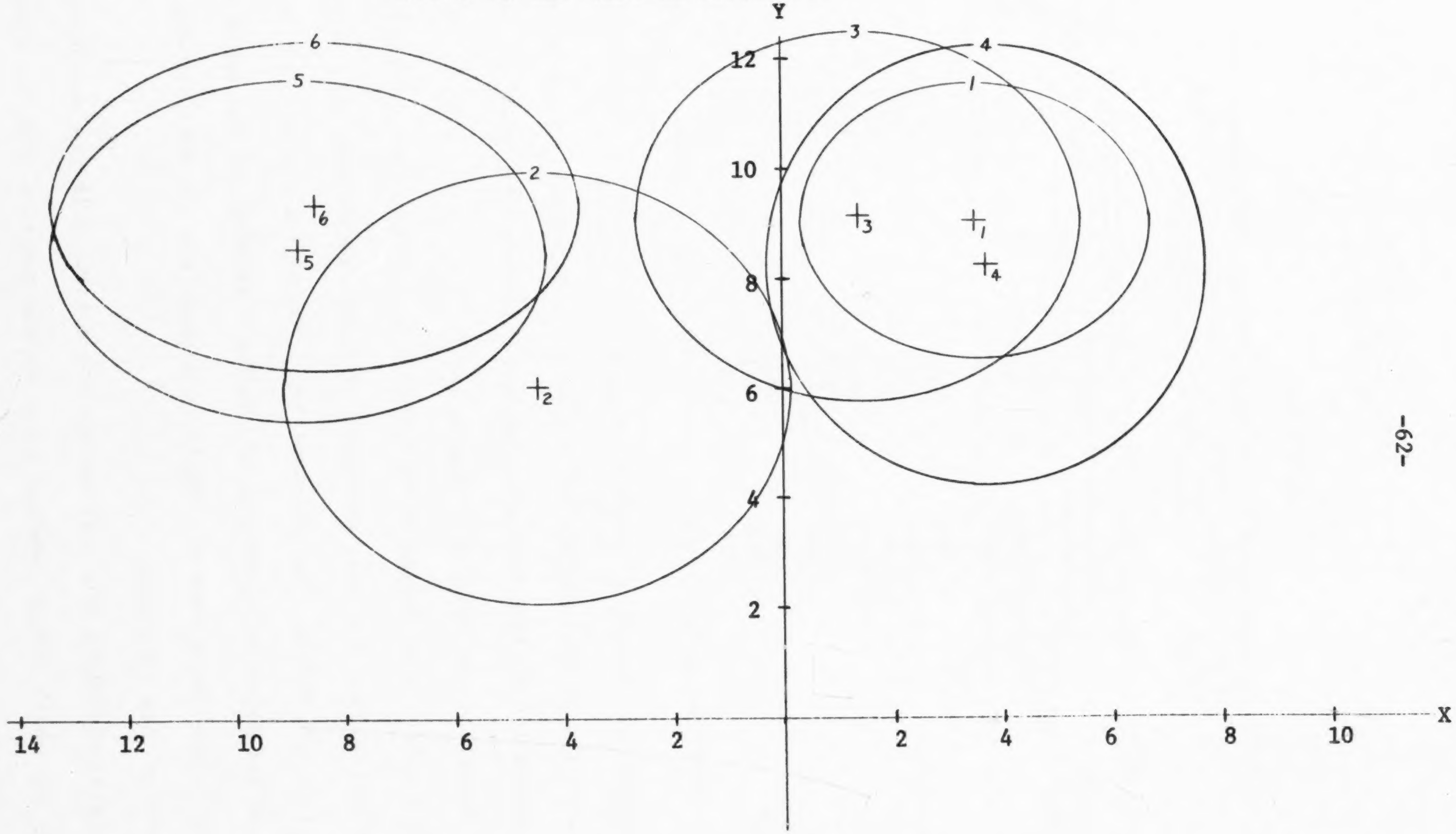
Female Occupational Grouping, Graduate Population.

The analysis of MVII scores for the female occupational grouping in the graduate population yielded four discriminant functions with $P < .05$. The first two functions are plotted as Figure 14.

Three clusters were formed along function one. The first cluster, at the higher end of function one, consisted of practical nursing (1), dental assistant (3), and medical lab assistant (4). The second cluster, at the lower end of the function, consisted of clerical training (5) and secretarial training (6). The third cluster containing cosmetology (2) fell between the two clusters on this functions.

Discrimination along function two was not evident with the exception of cosmetology (2) which placed somewhat lower on the function than the other five occupations. Combination of the first two functions graphically in Figure 14 yielded the same clusters as described on function one.

FIGURE 14
PLOT OF THE FEMALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MVII SCORES IN THE GRADUATE POPULATION



$$X = \text{FUNCTION 1:}\quad (-.2372)(H-1) + .6160(H-2) + (-.6480)(H-3) + (-.2203)(H-4) + .0369(H-5) + (-.1063)(H-6) + (-.0390)(H-7) + (-.2846)(H-8) + (-.0258)(H-9)$$

$$Y = \text{FUNCTION 2:}\quad (-.3130)(H-1) + .5632(H-2) + .5585(H-3) + (-.1211)(H-4) + (-.3220)(H-5) + (-.1977)(H-6) + .0264(H-7) + .0524(H-8) + .3347(H-9)$$

Table 28 presents the weights applied to the original MVII scales to yield the first two discriminant functions and the correlations of these functions with the nine homogeneous scales. Additional information on this analysis may be found in Tables 9D and 9E in the Appendices.

TABLE 28

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MVII SCORES FOR THE FEMALE OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

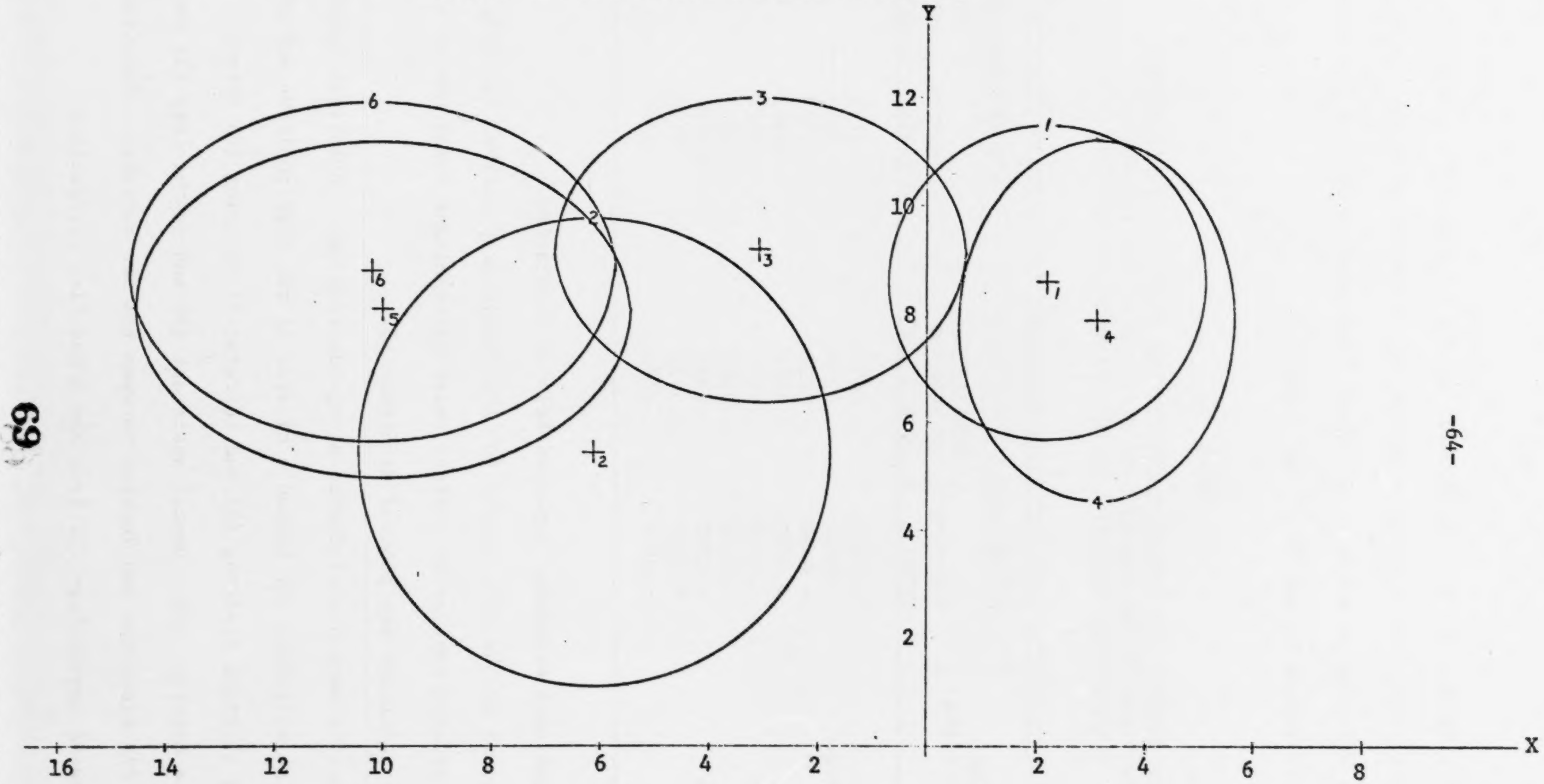
ORIGINAL INSTRUMENT SCALE	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
H-1 Mechanical	-.2372	.0313	-.3130	-.5339
H-2 Health Services	.6160	.9265	.5632	.3312
H-3 Office Work	-.6480	-.8827	.5585	.4139
H-4 Electronics	-.2203	-.2964	-.1211	-.3512
H-5 Food Service	.0369	.3557	-.3220	-.4269
H-6 Carpentry	-.1063	-.0683	-.1977	-.3992
H-7 Sales-Office	-.0390	.4333	.0264	.1118
H-8 Clean Hands	-.2846	-.5470	.0524	.2180
H-9 Outdoors	-.0258	.1720	.3347	-.0980

Female Occupational Grouping, Employed Related Population.

The analysis of the MVII scores for the female occupational grouping in the employed related population yielded three discriminant functions with $P < .05$. The first two functions are plotted as Figure 15.

Four clusters were discriminated along function one. Practical nursing (1) and medical lab assistant (4) formed a cluster at the high positive end of function one; clerical training (5) and secretarial training (6) formed a cluster at the negative end. Dental assistant (3) and cosmetology (2) were individually discriminated and located between the two extremes. Function two discriminated cosmetology (2) from the other five occupations.

FIGURE 15
PLOT OF THE FEMALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MVII SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: (-.2734)(H-1) + .5663(H-2) + (-.6973)(H-3) + (-.1874)(H-4) + .0009(H-5) + (-.0975)(H-6) + (-.0054)(H-7) + (-.2296)(H-8) + (-.1449)(H-9)

Y = FUNCTION 2: (-.5370)(H-1) + .5221(H-2) + .4961(H-3) + .0037(H-4) + (-.3414)(H-5) + (-.1529)(H-6) + .1425(H-7) + .0788(H-8) + .1625(H-9)

Combination of the first two functions graphically in Figure 15 yielded the same four clusters as described along function one. Table 29 presents the weights applied to the original MVII scales to yield the first two discriminant functions and the correlations of these functions with the nine MVII homogeneous scales. Additional information on this analysis may be found in Tables 10D and 10E in the Appendices.

TABLE 29

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MVII SCORES FOR THE FEMALE OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
H-1 Mechanical	-.2734	.0568	-.5370	-.5952
H-2 Health Services	.5663	.9286	.5221	.3072
H-3 Office Work	-.6973	-.9021	.4961	.3779
H-4 Electronics	-.1874	-.3067	.0037	-.3075
H-5 Food Service	.0009	.3547	-.3414	-.4145
H-6 Carpentry	-.0975	-.0645	-.1529	-.4170
H-7 Sales-Office	-.0054	.4528	.1425	.2215
H-8 Clean Hands	-.2296	-.5505	.0788	.2393
H-9 Outdoors	-.1449	.1689	.1625	-.1898

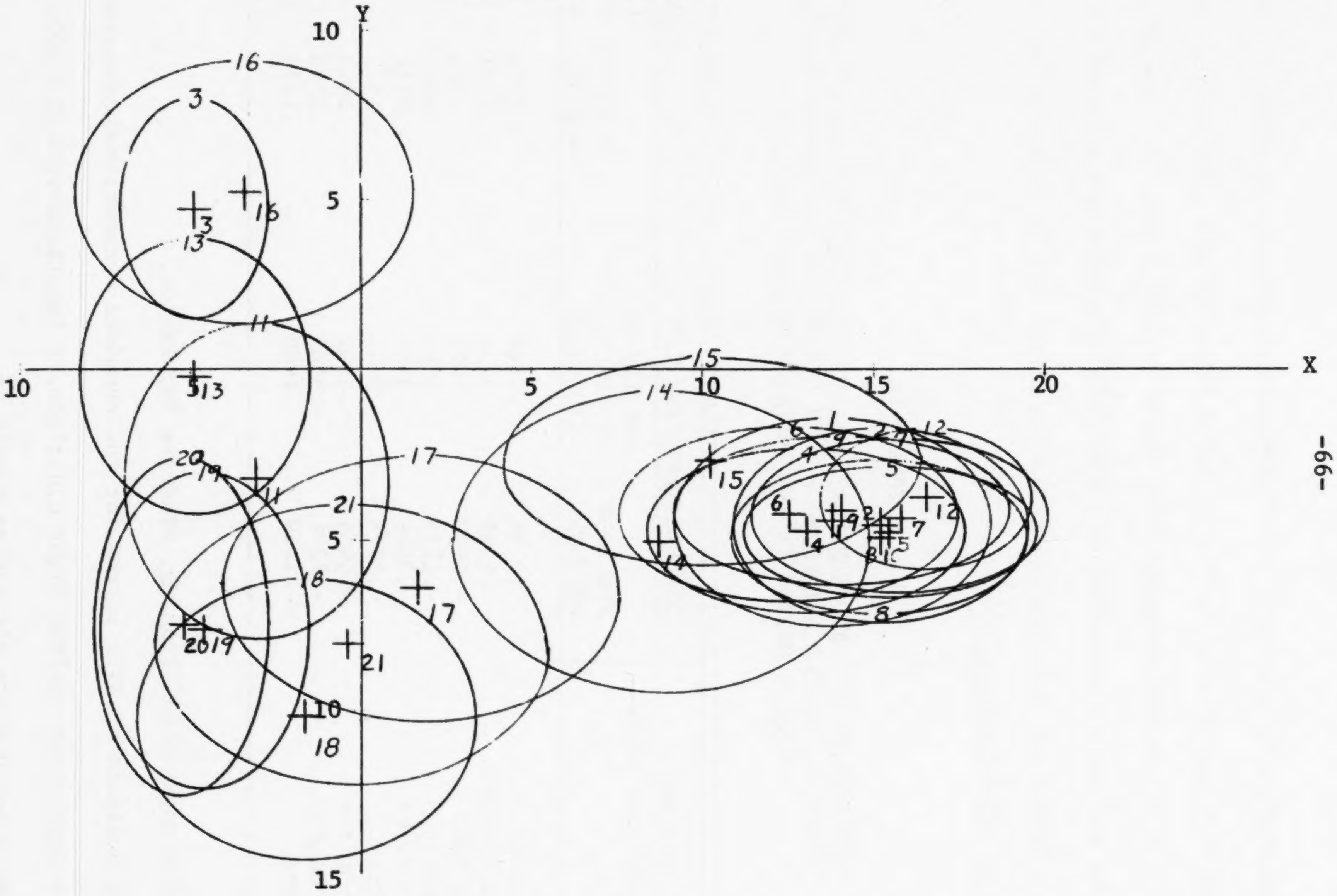
Combined Occupational Grouping, Graduate Population.

The analysis of MVII scores for the combined occupational grouping in the graduate population yielded eight discriminant functions with $P < .05$. The first two functions are plotted as Figure 16.

Discrimination along function one resulted in the separation of the male occupations, as a group, from the female occupations with the occupations containing both males and females located between these two clusters. Function

FIGURE 16

PLOT OF THE COMBINED OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MVII SCORES IN THE GRADUATE POPULATION



X = FUNCTION 1: .8145(H-1) + (-.3036)(H-2) + (-.3835)(H-3) + .1453(H-4) + (-.1052)(H-5) + (-.0087)(H-6) + .0770(H-7) + .1616(H-8) + .1817(H-9)

Y = FUNCTION 2: (-.1421)(H-1) + .6544(H-2) + (-.7115)(H-3) + (-.1302)(H-4) + .0106(H-5) + (-.0330)(H-6) + .0020(H-7) + (-.1608)(H-8) + (-.0357)(H-9) two did not discriminate among male occupations but did effectively separate the occupational groups having primarily female membership. Practical nursing (3) and medical lab assistant (16) formed a cluster with high placement on function two. A second cluster with low placement on function two was composed of accounting (18), clerical training (19), secretarial training (20), and data processing (21).

Combination of the first two functions graphically in Figure 16 yielded a tight cluster of male occupations [excepting agri-technology (14) and optical technology (15)] clearly separated from the remaining occupations. Clerical training (19) and secretarial training (20) formed a cluster within the female occupations, and practical nursing (3) fell completely within the space occupied by medical lab assistant.

Table 30 presents the weights applied to the original MVII scales to yield the first two discriminant functions and the correlations of these functions with the nine MVII homogeneous scales. Additional information on this analysis may be found in Tables 11D and 11E in the Appendices.

TABLE 30

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MVII SCORES FOR THE COMBINED OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

ORIGINAL INSTRUMENT SCALES		DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
		FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
H-1	Mechanical	.8145	.9897	-.1421	-.0033
H-2	Health Services	-.3036	-.5764	.6544	.7594
H-3	Office Work	-.3835	-.7788	-.7115	-.5998
H-4	Electronics	.1453	.8331	-.1302	-.0850
H-5	Food Service	-.1052	-.5797	.0106	.2931
H-6	Carpentry	-.0087	.2879	-.0330	-.0735
H-7	Sales-Office	.0770	-.6673	.0020	.2783
H-8	Clean Hands	.1616	-.5652	-.1608	-.3927
H-9	Outdoors	.1817	.8632	-.0357	.0431

Combined Occupational Grouping, Employed Related Population.

The analysis of MVII scores for the combined grouping in the employed related population yielded seven discriminant functions with $P < .05$. The first two functions are plotted as Figure 17.

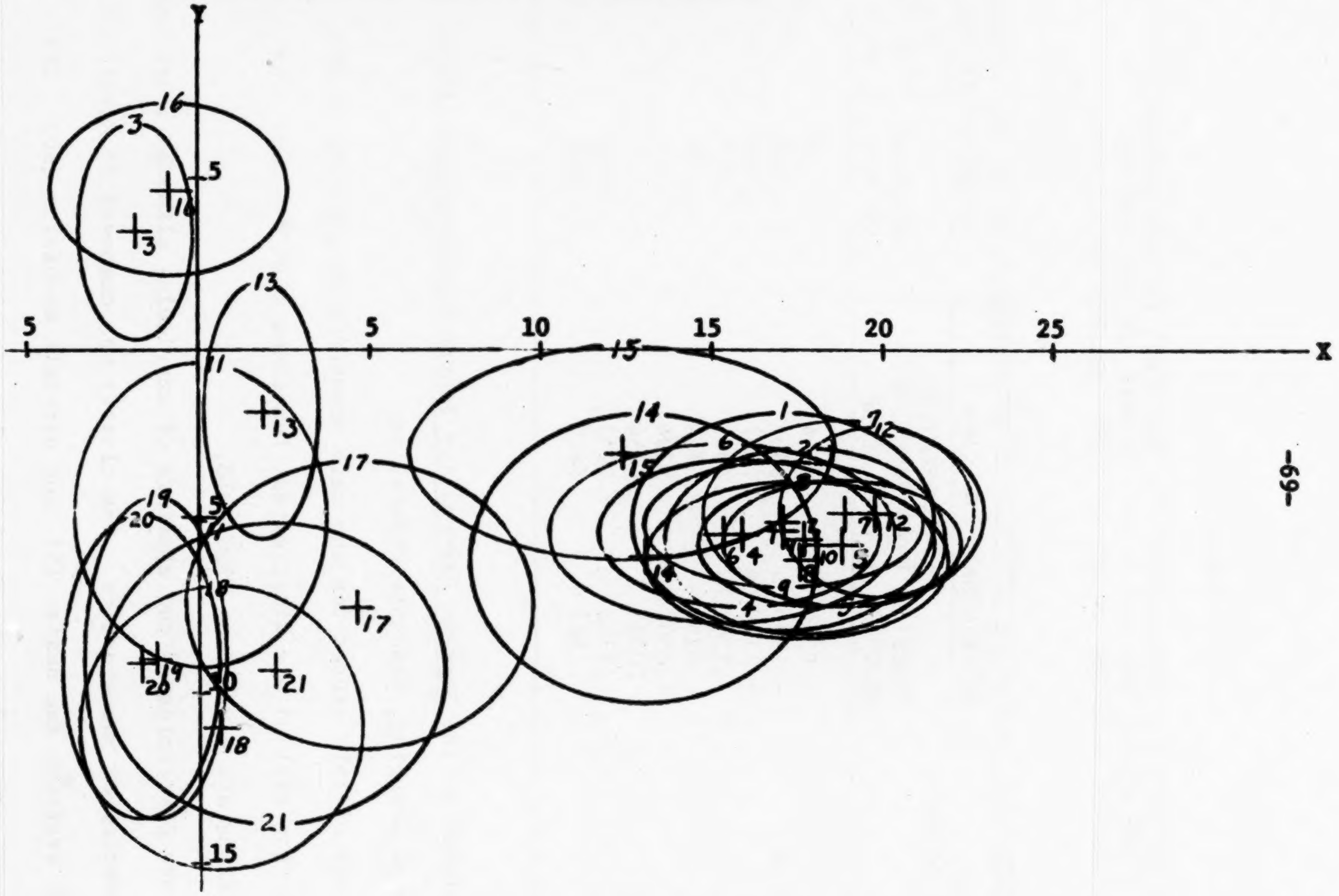
Function one clearly discriminated three clusters. Practical nursing (3) and medical lab assistant (16) formed a cluster at the high end of the function and accounting (18), clerical training (19), secretarial training (20), and data processing (21) formed a cluster at the lower end of the function. The remaining occupations were clustered between these two extremes on the second function.

Combination of the first two functions graphically in Figure 17 yielded a cluster composed of most of the male occupations [optical technology (12) and agri-technology (11) were somewhat discriminated from this cluster]. A second cluster was composed of clerical training (19) and secretarial training (20). A third cluster was composed of practical nursing (3) and medical lab assistant (16).

Table 31 presents the weights applied to the original MVII scales to yield the first two discriminant functions and the correlations of these functions with the nine MVII homogeneous scales. Additional information on this analysis may be found in Tables 12D and 12E in the Appendices.

FIGURE 17

PLOT OF THE COMBINED OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MVII SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: $.9380(H\text{-}1) + (-.1830)(H\text{-}2) + (-.1719)(H\text{-}3) + .1262(H\text{-}4) + (-.0250)(H\text{-}5) + (-.0508)(H\text{-}6) + .0283(H\text{-}7) + .1342(H\text{-}8) + .1382(H\text{-}9)$

Y = FUNCTION 2: $(-.1268)(H\text{-}1) + .6136(H\text{-}2) + (-.7468)(H\text{-}3) + (-.1420)(H\text{-}4) + (-.0389)(H\text{-}5) + (-.0283)(H\text{-}6) + .0107(H\text{-}7) + (-.1241)(H\text{-}8) + (-.1078)(H\text{-}9)$

TABLE 31

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MVII SCORES FOR THE COMBINED OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
H-1 Mechanical	.9380	.9954	-.1268	.0286
H-2 Health Services	-.1830	-.5306	.6136	.7882
H-3 Office Work	-.1719	-.7067	-.7468	-.6747
H-4 Electronics	.1262	.8530	-.1420	-.0858
H-5 Food Service	-.0250	-.5729	-.0389	.2628
H-6 Carpentry	-.0508	.3204	-.0283	-.0510
H-7 Sales-Office	.0283	-.6454	.0107	.3045
H-8 Clean Hands	.1342	-.5153	-.1241	-.4327
H-9 Outdoors	.1382	.8475	-.1078	.0885

Results Related to the Sixteen Personality Factor Questionnaire (16PF) Male Occupational Grouping, Graduate Population.

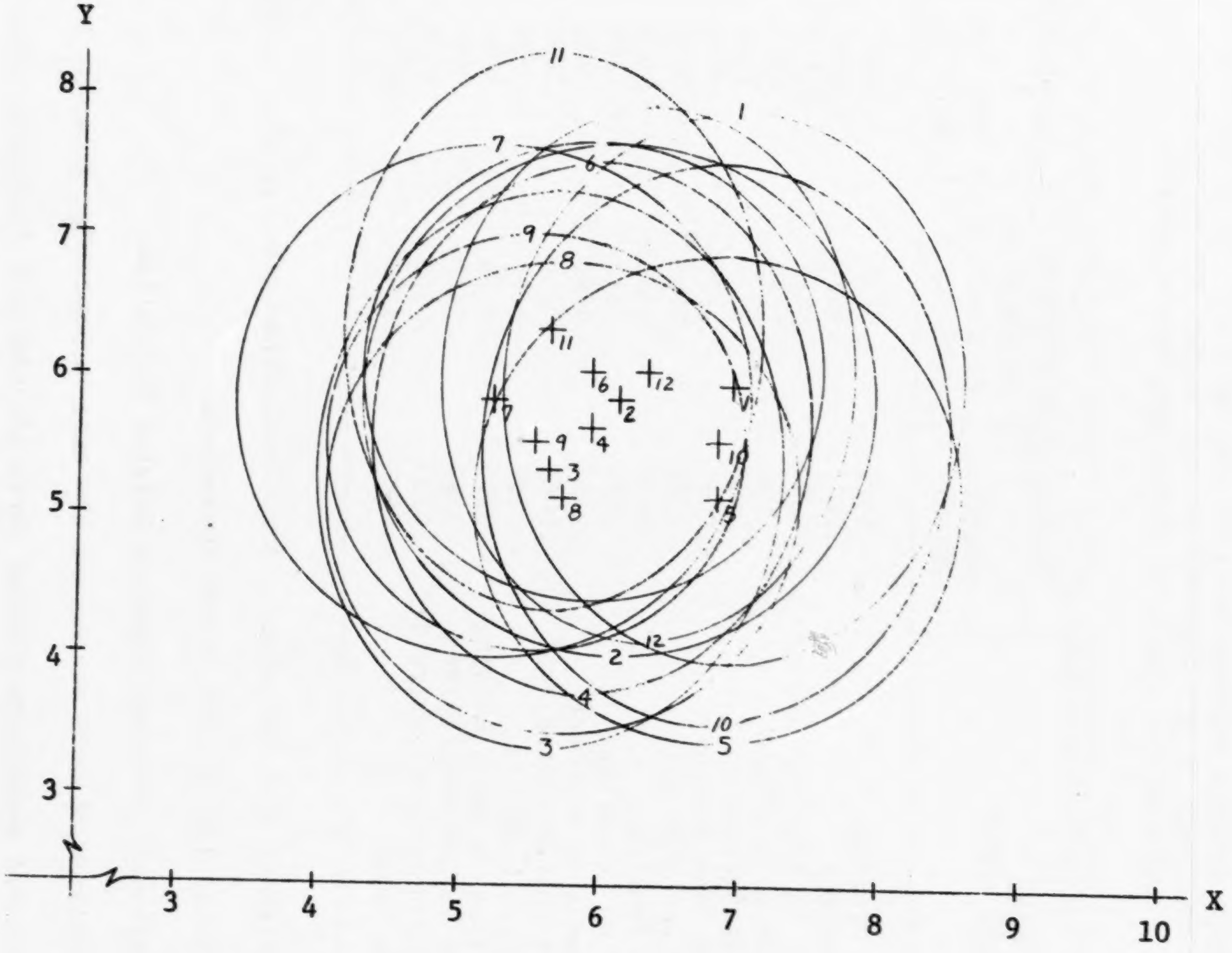
The analysis of 16PF scores for the male occupational grouping in the graduate population yielded six discriminant functions with $P < .05$. The first two functions are plotted as Figure 18.

Function one discriminated two clusters of curricula, although there was considerable overlap of the clusters. One cluster was composed of electronics (1), mechanical drafting and design (5), and aircraft mechanics (10). The second cluster was composed of the remaining nine occupations.

Function two did not discriminate any clearly defined clusters. Combination of the first two functions graphically in Figure 18 revealed considerable overlap among the twelve male occupations.

Table 32 presents the weights applied to the original 16PF scales to yield the first two discriminant functions and the correlations of these functions

FIGURE 18
PLOT OF THE MALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF 16 PF SCORES IN THE GRADUATE POPULATION



X = FUNCTION 1: (-.0916)(A) + .7882(B) + (-.0640)(C) + .0051(E) + .0413(F) + (-.2054 (G) + .1223(H) + .0446(I) + .1264(L) + .3883(M) + (-.0065)(N) + (-.1139)(O) + .3115(Q-1) + .1660(Q-2) + (-.0055)(Q-3) + (-.0931)(Q-4)

Y = FUNCTION 2: .6871(A) + .1533(B) + (-.0312)(C) + (-.0399)(E) + (-.3307)(F) + .4796(G) + (-.0890)(H) + (-.0670)(I) + (-.1106)(L) + .0751(M) + .2088(N) + (-.0650) (O) + .1924(Q-1) + .0582(Q-2) + .0535(Q-3) + (-.2027)(Q-4)

TABLE 32

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF 16PF SCORES FOR THE MALE OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
A. Aloof vs Outgoing	-.0916	-.0426	.6871	.6217
B. Dull vs Bright	.7882	.6536	.1533	.0626
C. Emotional vs Mature	-.0640	-.0855	-.0312	.0666
E. Submissive vs Dominant	.0051	.1578	-.0399	-.1653
F. Glum vs Enthusiastic	.0413	.1116	-.3307	-.1462
G. Casual vs Conscientious	-.2054	-.2924	.4796	.5274
H. Timid vs Adventurous	.1223	.1666	-.0890	.0948
I. Tough vs Sensitive	.0446	.0550	-.0670	-.0024
L. Trustful vs Suspecting	.1264	.1819	-.1106	-.1994
M. Conventional vs Eccentric	.3783	.4992	.0751	.0498
N. Simple vs Sophisticated	-.0065	.0769	.2088	.1456
O. Confident vs Insecure	-.1139	-.1660	-.0650	-.0570
Q-1 Conservative vs Experimenting	.3115	.4404	.1924	.3270
Q-2 Dependent vs Self-Sufficient	.1660	.2480	.0582	.0364
Q-3 Uncontrolled vs Self-Controlled	-.0055	.0109	.0535	.2413
Q-4 Stable vs Tense	-.0931	-.1297	-.2027	-.2506

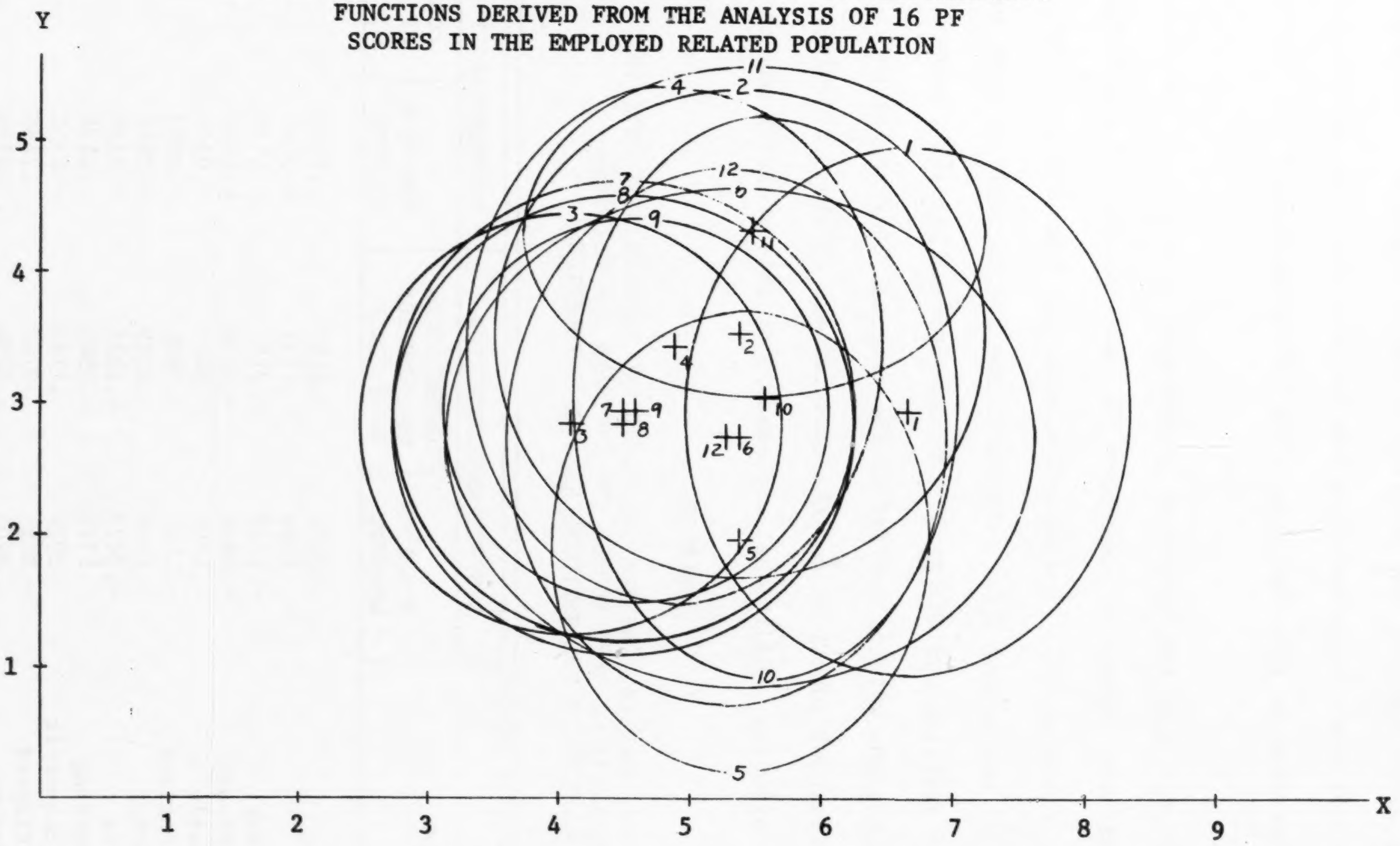
with the original 16PF variables. Additional information on this analysis may be found in Tables 13D and 13E in the Appendices.

Male Occupational Grouping, Employed Related Population.

The analysis of 16PF scores for the male occupational grouping in the employed related population yielded three discriminant functions with $P < .05$. The first two functions are plotted in Figure 19.

Discrimination along function one resulted in three clusters. The first was composed of electronics (1) which was discriminated by its high placement along the first function. The second was composed of power and home electricity (2), mechanical drafting and design (5), diesel mechanics (6), aircraft mechanics (10), agri-technology (11), and optical technology (12). The third cluster was composed of machine shop (7), welding (8), farm equipment mechanics (9),

FIGURE 19
PLOT OF THE MALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF 16 PF SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: .2224(A) + .5780(B) + (-.1749)(C) + (-.0806)(E) + (-.1469)(F) + (-.1049)(G) + .1305(H) + (-.2422)(I) + .1378(L) + .1920(M) + (-.0014)(N) + (-.0203)(O) + .5725(Q-1) + .2369(Q-2) + (-.1758)(Q-3) + .0016(Q-4)

Y = FUNCTION 2: .5630(A) + (-.2157)(B) + .1050(C) + (-.2855)(E) + (-.0302)(F) + .2885(G) + (-.3688)(H) + (-.2167)(I) + (-.1128)(L) + (-.1952)(M) + .3639(N) + .0759(O) + 1592(Q-1) + (-.0048)(Q-2) + .2247(Q-3) + (-.1094)(Q-4) and carpentry (3).

Discrimination along function two resulted in three groupings. Mechanical drafting and design (5) was discriminated by its low placement and agri-technology (11) by its high placement on this function. The remaining occupations formed the third cluster.

Combination of the first two functions graphically in Figure 19 yielded four clusters. The first was composed of carpentry (3), machine shop (7), welding (8), and farm equipment mechanics (9). The second cluster was composed of diesel mechanics (6) and optical technology (12). The third and fourth clusters were composed of mechanical drafting and design (5) and agri-technology (11), respectively.

Table 33 presents the weights applied to the original 16PF scales to yield the first two discriminant functions and the correlations of these functions with the original 16PF variables. Additional information on this analysis may be found

TABLE 33

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF 16PF SCORES FOR THE MALE OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
A. Aloof vs Outgoing	.2224	.2189	.5630	.5052
B. Dull vs Bright	.5780	.4371	-.2157	-.1477
C. Emotional vs Mature	-.1749	-.2157	.1050	.2482
E. Submissive vs Dominant	-.0806	-.0030	-.2855	-.4320
F. Glum vs Enthusiastic	-.1469	-.0444	-.0302	.0883
G. Casual vs Conscientious	-.1049	-.1894	.2885	.4062
H. Timid vs Adventurous	.1305	.1329	-.3688	-.0450
I. Tough vs Sensitive	-.2422	-.1334	-.2167	-.1980
L. Trustful vs Suspecting	.1378	.2506	-.1128	-.2524
M. Conventional vs Eccentric	.1920	.2748	-.1952	-.2957
N. Simple vs Sophisticated	-.0014	.0782	.3639	.1759
O. Confident vs Insecure	-.0203	-.0038	.0759	-.0398
Q-1 Conservative vs Experimenting	.5725	.6906	.1592	.2367
Q-2 Dependent vs Self-Sufficient	.2369	.2367	-.0048	-.0238
Q-3 Uncontrolled vs Self-Controlled	-.1758	-.1288	.2247	.4365
Q-4 Stable vs Tense	.0016	-.0282	-.1094	-.2167

in Tables 14D and 14E in the Appendices.

Female Occupational Grouping, Graduate Population.

The analysis of 16PF scores for the female occupational grouping in the graduate population yielded four discriminant functions with $P < .05$. The first two functions are plotted as Figure 20.

Placement of the six female occupations along function one clearly resulted in two clusters. One cluster was composed of practical nursing (1) and medical lab assistant (4). The second cluster was made up of the remaining four occupations. Discrimination along function two did not result in clearly defined clusters.

Combination of the first two clusters graphically in Figure 20 yielded two clusters. The first cluster was composed of practical nursing (1) and medical lab assistant (4), and the second was made up of cosmetology (2), dental assistant (3), clerical training (5), and secretarial training (6). The second cluster was composed of two sub-clusters, the first including clerical training (5) and secretarial training (6), and the second composed of cosmetology (2) and dental assistant (3).

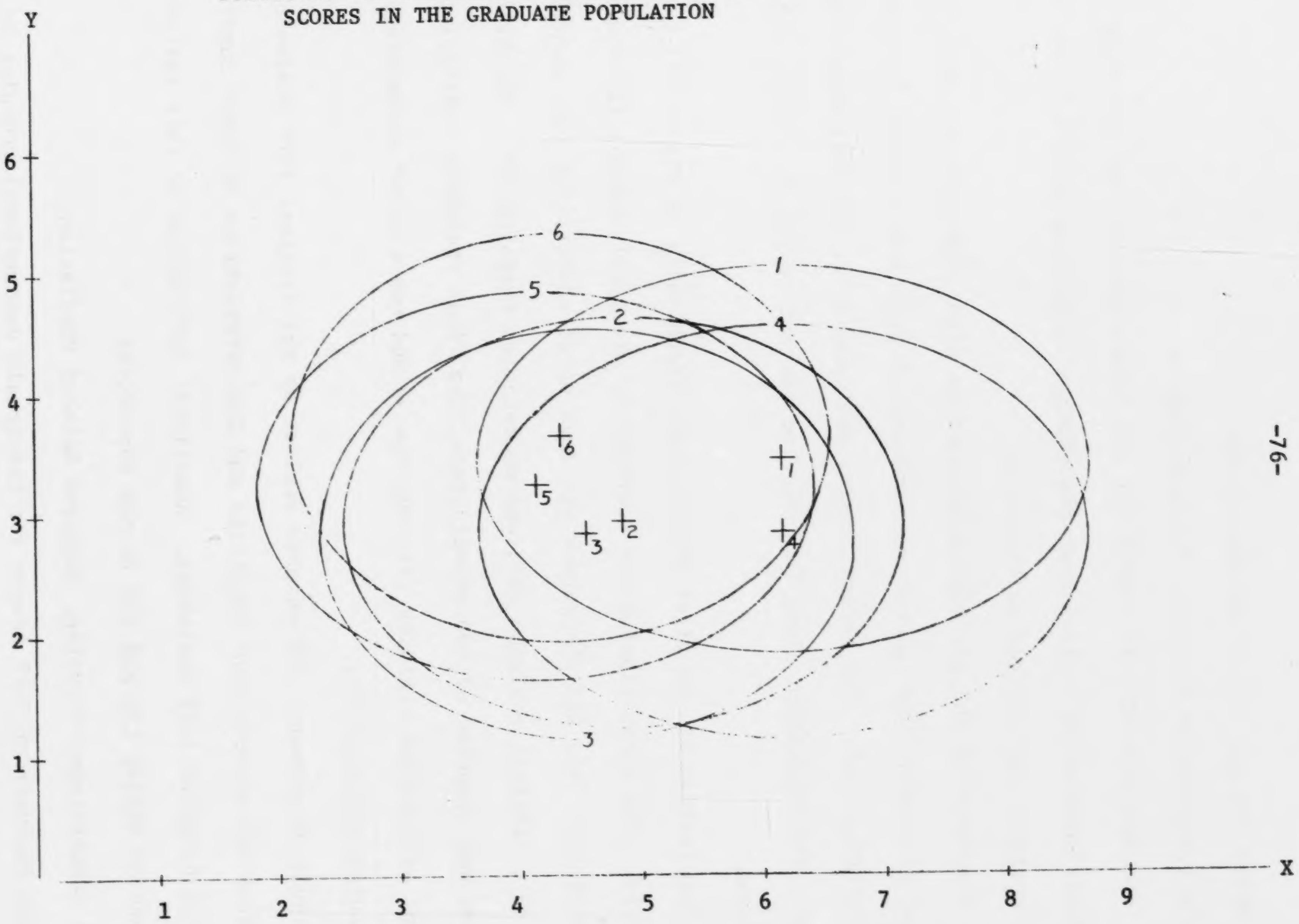
Table 34 presents the weights applied to the original 16PF scales to yield the first two discriminant functions and the correlations of these functions with the original 16PF variables. Additional information on this analysis may be found in Tables 15D and 15E in the Appendices.

Female Occupational Grouping, Employed Related Population.

The analysis of 16PF scores for the female occupational grouping in the employed related population yielded two discriminant functions with $P < .05$. These two functions are plotted as Figure 21.

Discrimination along function one resulted in two clusters. The first cluster was composed of practical nursing (1) and medical lab assistant (4).

FIGURE 20
PLOT OF THE FEMALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF 16 PF SCORES IN THE GRADUATE POPULATION

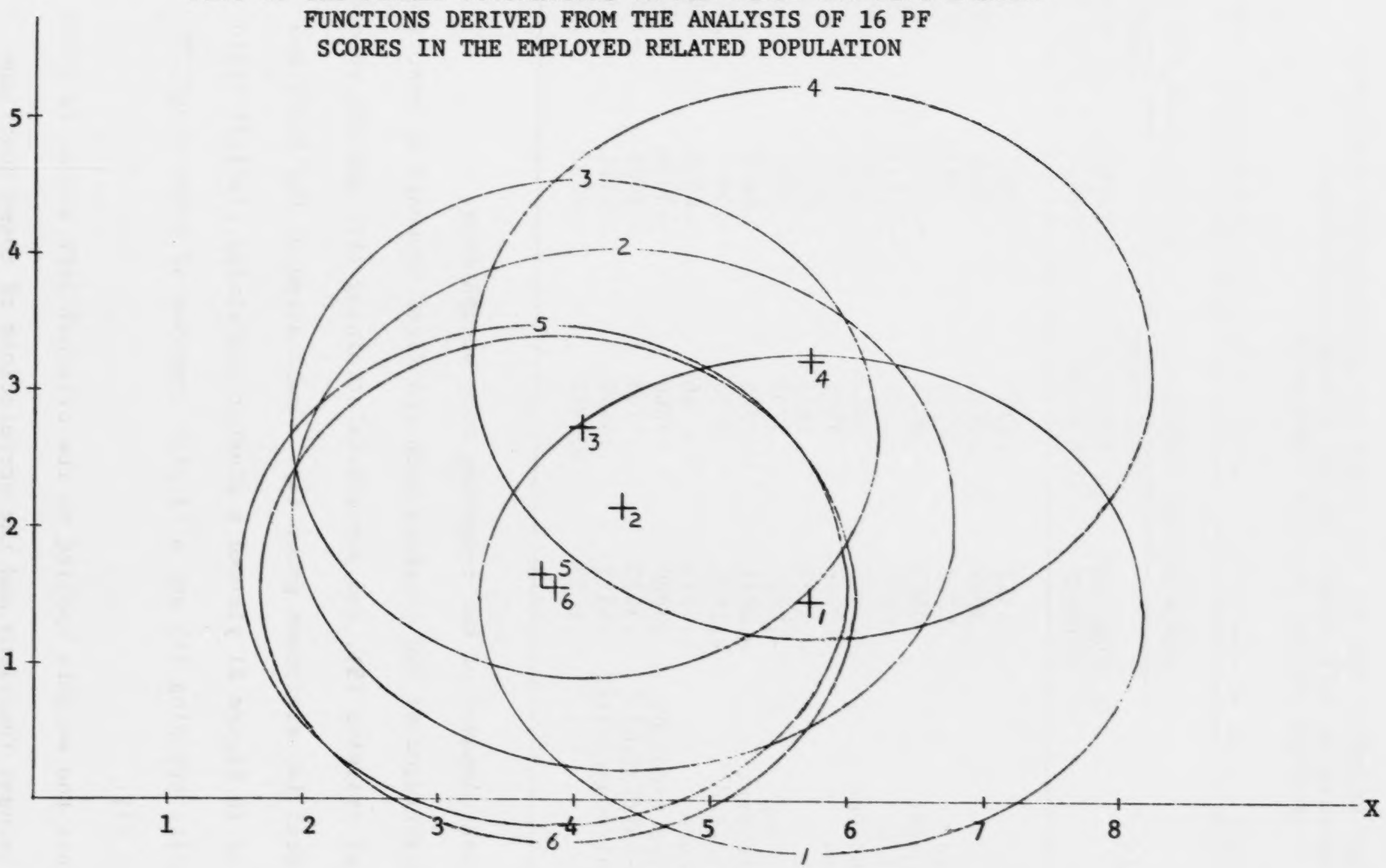


X = FUNCTION 1: .4367(A) + .3044(B) + .0228(C) + .0813(E) + .0547(F) + (-.3142)(G)
+ .0946(H) + (-.1734)(I) + (-.2823)(L) + (-.0821)(M) + (-.1635)(N)
+ (-.0125)(O) + .3829(Q-1) + .3073(Q-2) + 4312(Q-3) + (-.1687)(Q-4)

Y = FUNCTION 2: .0662(A) + .8046(B) + .1585(C) + (-.0867)(E) + (-.1647)(F) + .2473
(G) + .0345(H) + .2237(I) + (-.0437)(L) + .0612(M) + (-.0944)(N) +
.0354(O) + (-.3046)(Q-1) + (-.1651)(Q-2) + .0151(Q-3) + (-.2002)(Q-4)

FIGURE 21

PLOT OF THE FEMALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF 16 PF SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: .4353(A) + .2343(B) + .0151(C) + .1574(E) + .0124(F) + (-.3615)(G) + .1775(H) + (-.1718)(I) + (-.1500)(L) + (-.1390)(M) + (-.2196)(N) + (-.0503)(O) + .3146(Q-1) + .3691(Q-2) + .4241(Q-3) + (-.1765)(Q-4)

Y = FUNCTION 2: (-.1888)(A) + (-.4239)(B) + .1232(C) + .2450(E) + (-.0086)(F) + (-.4120)(G) + (-.1111)(H) + .0989(I) + .2771(L) + .1029(M) + .3380 (N) + (-.2271)(O) + .4733(Q-1) + .0945(Q-2) + (-.0133)(Q-3) + (.1765) (Q-4)

TABLE 34

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF 16PF SCORES FOR THE FEMALE OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
A. Aloof vs Outgoing	.4367	.5060	.0662	.0207
B. Dull vs Bright	.3044	.1918	.8046	.6727
C. Emotional vs Mature	.0228	.2790	.1585	.2430
E. Submissive vs Dominant	.0813	-.0055	-.0867	-.1780
F. Glum vs Enthusiastic	.0547	.2305	-.1647	-.1051
G. Casual vs Conscientious	-.3142	-.1522	.2473	.3054
H. Timid vs Adventurous	.0946	.3809	.0345	.0333
I. Tough vs Sensitive	-.1734	-.1833	.2237	.2909
L. Trustful vs Suspecting	-.2823	-.3796	-.0437	-.1645
M. Conventional vs Eccentric	-.0821	-.0925	.0612	.0147
N. Simple vs Sophisticated	-.1635	-.1654	-.0944	-.1857
O. Confident vs Insecure	-.0125	-.1746	.0354	.0083
Q-1 Conservative vs Experimenting	.3829	.4866	-.3046	-.3264
Q-2 Dependent vs Self-Sufficient	.3073	.3105	-.1651	-.1524
Q-3 Uncontrolled vs Self-Controlled	.4312	.6470	.0151	.1417
Q-4 Stable vs Tense	-.1687	-.4352	-.2002	-.2796

The second cluster was composed of the remaining four occupations.

Function two discriminated two clusters with the first composed of practical nursing (1), clerical training (5), and secretarial training (6); and the second composed of the medical lab assistant group (4). Combination of the first two functions graphically in Figure 21 yielded a cluster containing clerical training (5) and secretarial training (6) and a cluster composed of cosmetology (2) and dental assistant (3).

Table 35 presents the weights applied to the original 16PF scales to yield the first two discriminant functions and the correlations of these functions with the original 16PF variables. Additional information on this analysis may

TABLE 35

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF 16PF SCORES FOR THE FEMALE OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
A. Aloof vs Outgoing	.4353	.5095	-.1888	-.1220
B. Dull vs Bright	.2343	.1468	-.4239	-.2176
C. Emotional vs Mature	.0151	.2505	.1232	-.1083
E. Submissive vs Dominant	.1574	.0675	.2450	.3329
F. Glum vs Enthusiastic	.0124	.1934	-.0086	-.0808
G. Casual vs Conscientious	-.3615	-.1885	-.4120	-.4589
H. Timid vs Adventurous	.1775	.4029	-.1111	-.1367
I. Tough vs Suspecting	-.1718	-.2281	.0989	.0440
L. Trustful vs Suspecting	-.1500	-.2964	.2771	.3677
M. Conventional vs Eccentric	-.1390	-.1468	.1029	.2285
N. Simple vs Sophisticated	-.2196	-.1546	.3380	.3989
O. Confident vs Insecure	-.0503	-.2181	-.2271	-.2071
Q-1 Conservative vs Experimenting	.3146	.4497	.4733	.4457
Q-2 Dependent vs Self-Sufficient	.3691	.3431	.0945	.0868
Q-3 Uncontrolled vs Self-Controlled	.4241	.6458	-.0133	-.2185
Q-4 Stable vs Tense	-.1765	-.4442	.1765	.2515

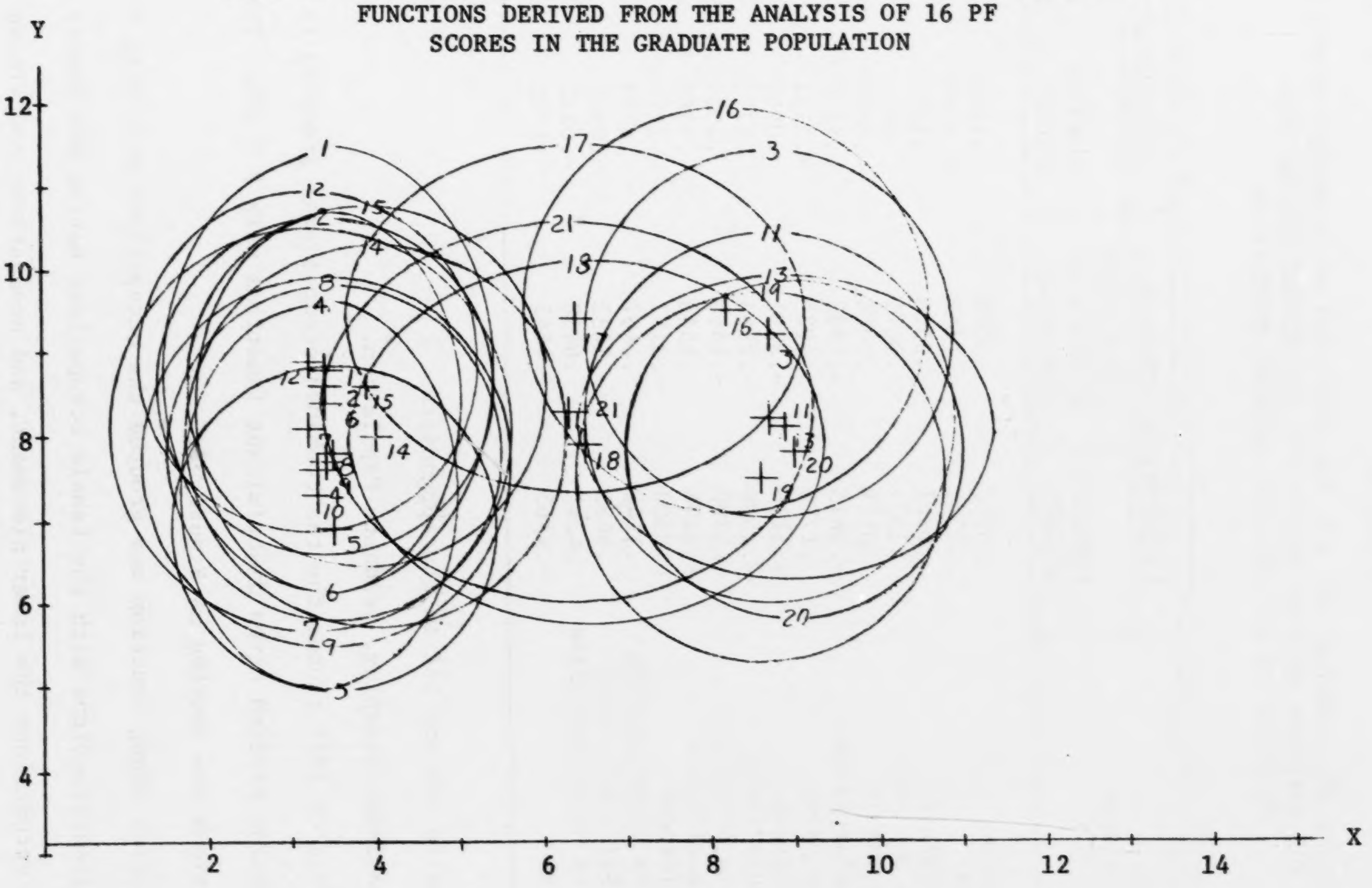
be found in Tables 16D and 16E in the Appendices.

Combined Occupational Grouping, Graduate Population.

The analysis of 16PF scores for the combined occupational grouping in the graduate population yielded seven discriminant functions with $P < .05$. The first two functions are plotted as Figure 22.

Discrimination along function one grouped the occupations according to the original sex classifications with the female occupations having the higher placement, the male occupations the lower placement, and occupations containing both males and females placed between the first two clusters. Discrimination along function two did not produce clearly defined clusters nor occupational groups clearly differentiated by their placement along this function.

FIGURE 22
PLOT OF THE COMBINED OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF 16 PF SCORES IN THE GRADUATE POPULATION



X = FUNCTION 1: .4337(A) + .0860(B) + .0356(C) + (-.1141)(E) + .0776(F) + 0715(G) + (-.0800)(H) + .8418(I) + (-.0359)(L) + .0437(M) + (-.0909)(N) + .0422 (O) + (-.1757)(Q-1) + (-.1078)(Q-2) + (-.0593)(Q-3) + .0686(Q-4)

Y = FUNCTION 2: .4813(A) + .4611(B) + .0036(C) + .0679(E) + .0805(F) + (-.3037)(G) + .1306(H) + (-.0668)(I) + (-.1776)(L) + .1835(M) + (-.0518)(N) + (-.0550)(O) + .4195(Q-1) + .3069(Q-2) + .2405(Q-3) + (-.1788)(Q-4)

TABLE 36

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF 16PF SCORES FOR THE COMBINED OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
A. Aloof vs Outgoing	.4337	.6059	.4813	.5045
B. Dull vs Bright	.0860	.0774	.4611	.2989
C. Emotional vs Mature	.0356	-.1007	.0036	.1736
E. Submissive vs Dominant	-.1141	-.2057	.0679	.1236
F. Glum vs Enthusiastic	.0776	.1627	.0805	.3057
G. Casual vs Conscientious	.0715	.1702	-.3037	-.2003
H. Timid vs Adventurous	-.0800	-.0393	.1306	.4327
I. Tough vs Sensitive	.8418	.9397	-.0668	-.0460
L. Trustful vs Suspecting	-.0359	-.0370	-.1776	-.2183
M. Conventional vs Eccentric	.0437	.1384	.1835	.1659
N. Simple vs Sophisticated	-.0909	-.1587	-.0518	-.0069
O. Confident vs Insecure	.0422	.1514	-.0550	-.1821
Q-1 Conservative vs Experimenting	-.1757	-.1357	.4195	.5385
Q-2 Dependent vs Self-Sufficient	-.1078	-.3136	.3069	.2853
Q-3 Uncontrolled vs Self-Controlled	-.0593	-.1324	.2405	.4383
Q-4 Stable vs Tense	.0686	.2555	-.1788	-.3636

Combination of the first two functions graphically in Figure 22 yielded essentially the same clusters as described for function one above with the cluster composed of occupations containing both males and females falling between and overlapping both the male cluster and the female cluster.

Table 36 presents the weights applied to the original 16PF scales to yield the first two discriminant functions and the correlations of these functions with the original 16PF variables. Additional information on this analysis may be found in Tables 17D and 17E in the Appendices.

Combined Occupational Grouping, Employed Related Population.

The analysis of 16PF scores for the combined occupational grouping in the employed related population yielded six discriminant functions with $P < .05$.

The first two functions are plotted as Figure 23.

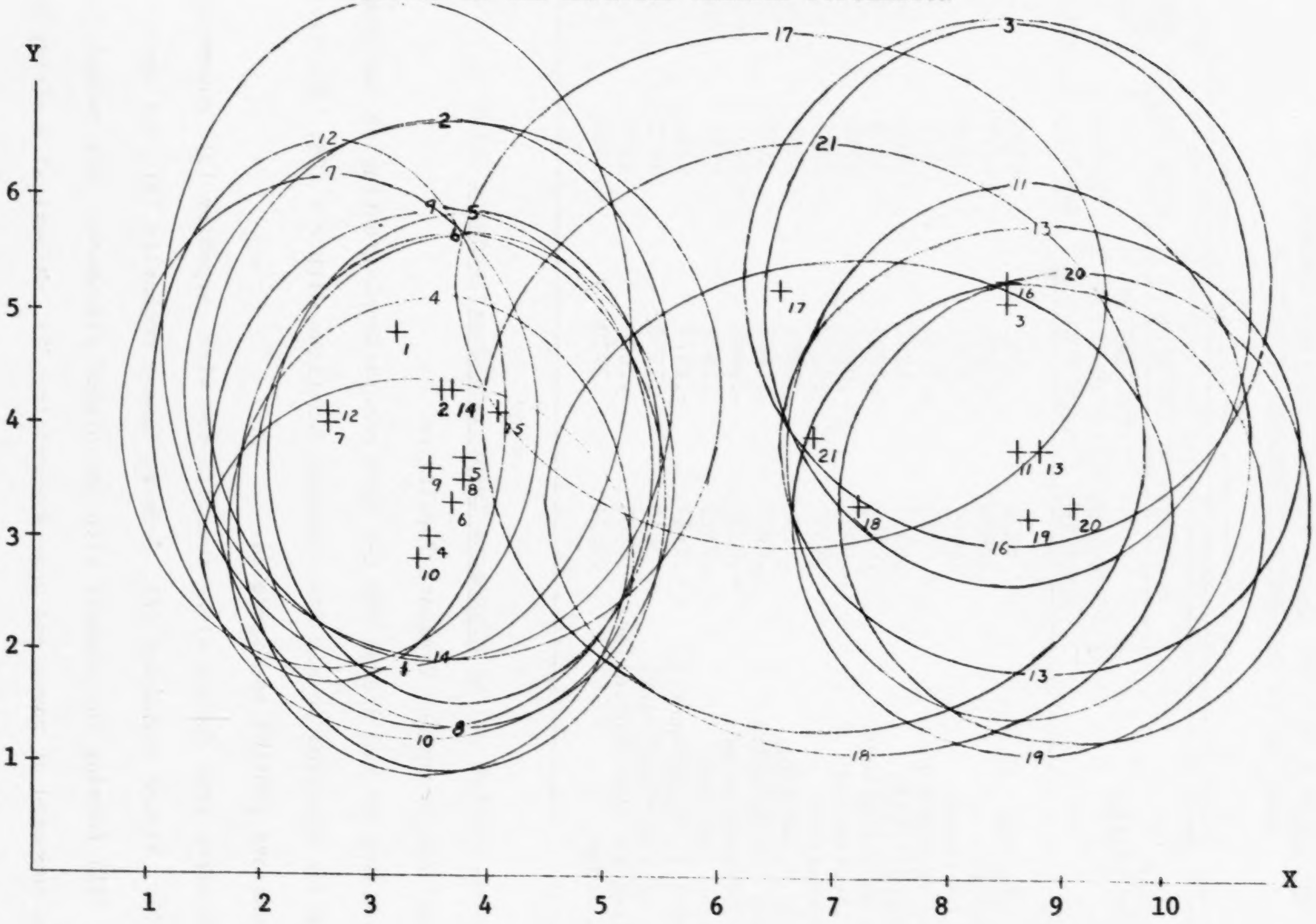
Discrimination along function one clearly separated the three basic occupational groupings with the female occupations placed at the high end of the function, the male occupations at the lower end, and the occupations containing both males and females placed between these two extremes.

Function two discriminated two clusters. The first, toward the higher end of the function, was composed of electronics (1), practical nursing (3), medical lab assistant (16), and sales (17). The second cluster consisted of the remaining seventeen occupations.

Combination of the first two functions graphically in Figure 23 resulted in the same gross clusters as described along function one with seven identifiable sub-clusters. Within the overall male cluster, four sub-clusters were formed. The first was composed of automotive mechanics (5), mechanical drafting and design (6), machine shop (8), and welding (9). The second sub-cluster within the larger male grouping was composed of power and home electricity (2), agri-technology (14), and optical technology (15). A third sub-cluster was composed of diesel mechanics (7) and aircraft mechanics (12). The fourth sub-cluster within the overall male cluster was made up of carpentry (4) and farm equipment mechanics (10). Within the cluster of primarily female occupations, three sub-clusters were discriminated. The first was composed of practical nursing (3) and medical lab assistant (16). The second was made up of cosmetology (11) and dental assistant (13), and the third sub-cluster was composed of clerical training (19) and secretarial training (20).

Table 37 presents the weights applied to the original 16PF scales to yield the first two discriminant functions and the correlations of these functions with the original 16PF variables. Additional information on this analysis may be found in Tables 18D and 18E in the Appendices.

FIGURE 23
PLOT OF THE COMBINED OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF 16 PF SCORES IN THE EMPLOYED RELATED POPULATION



$$
\begin{aligned}
X = \text{FUNCTION 1:}\quad & .4276(A) + .0906(B) + .0719(C) + (-.0880)(E) + .0517(F) + .0925(G) \\
& + (-.0997)(H) + .8310(I) + .0150(L) + .0662(M) + (-.0364)(N) + \\
& .0515(O) + (-.1467)(Q\text{-}1) + (-.2019)(Q\text{-}2) + (-.0903)(Q\text{-}3) + .0731(Q\text{-}4)
\end{aligned}
$$

$$
\begin{aligned}
Y = \text{FUNCTION 2:}\quad & .6340(A) + .2272(B) + .0358(C) + .1141(E) + .0180(F) + (-.3308)(G) \\
& + .1240(H) + (-.0271)(I) + (-.1167)(L) + (-.0359)(M) + (-.0732)(N) \\
& + (-.0178)(O) + .4294(Q\text{-}1) + .3072(Q\text{-}2) + .2846(Q\text{-}3) + (-.1609)(Q\text{-}4)
\end{aligned}
$$

TABLE 37

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF 16PF SCORES FOR THE COMBINED OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

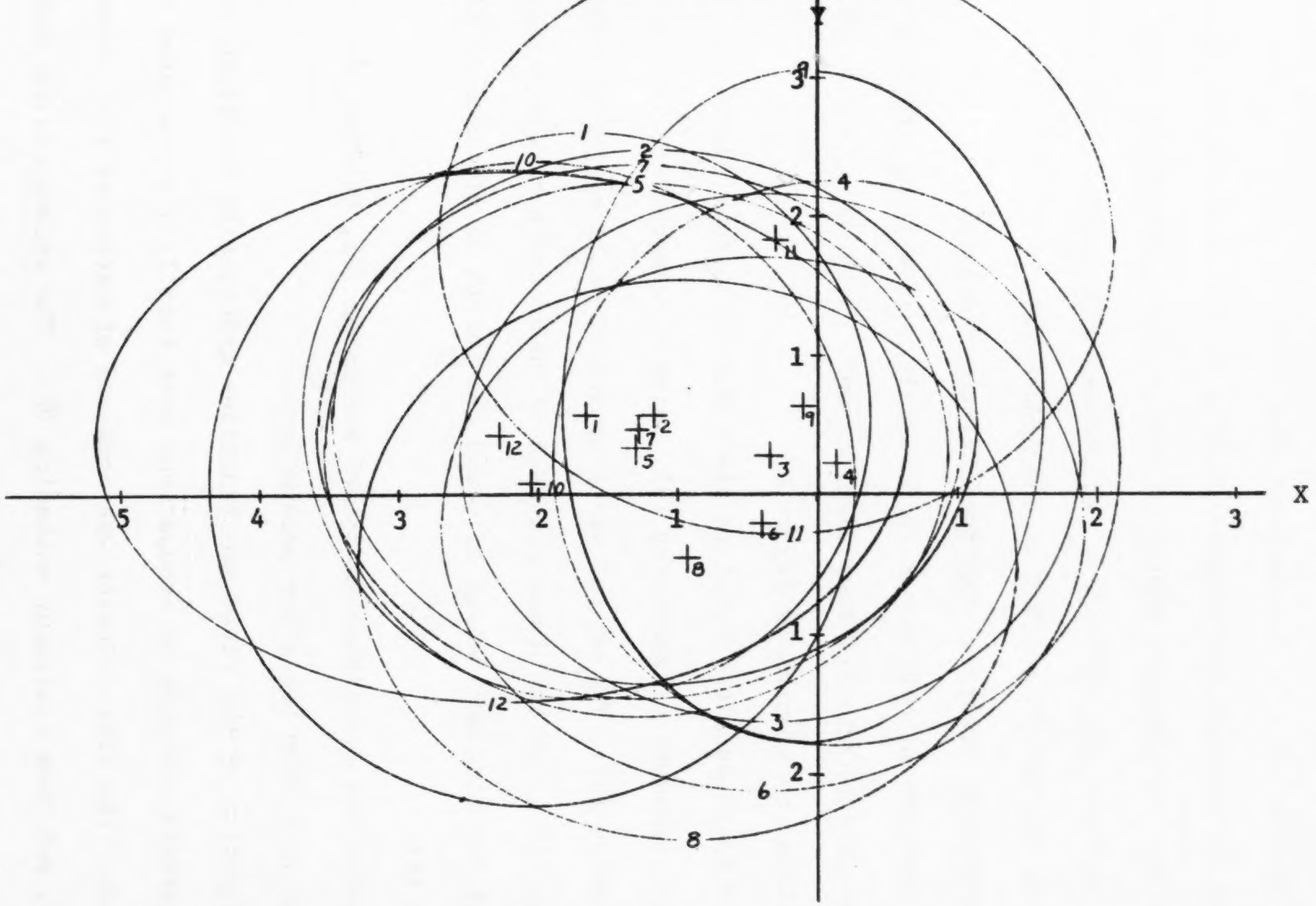
ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
A. Aloof vs Outgoing	.4276	.5582	.6340	.6221
B. Dull vs Bright	.0906	.0809	.2272	.1555
C. Emotional vs Mature	.0719	-.0774	.0358	.1856
E. Submissive vs Dominant	-.0880	-.1666	.1141	.0891
F. Glum vs Enthusiastic	.0517	.1177	.0180	.2497
G. Casual vs Conscientious	.0925	.1615	-.3308	-.2001
H. Timid vs Adventurous	-.0997	-.0660	.1240	.4018
I. Tough vs Sensitive	.8310	.9358	-.0271	-.0346
L. Trustful vs Suspecting	.0150	.0053	-.1167	-.1916
M. Conventional vs Eccentric	.0662	.1678	-.0359	-.0389
N. Simple vs Sophisticated	-.0364	-.0803	-.0732	-.0193
O. Confident vs Insecure	.0515	.1641	-.0178	-.1549
Q-1 Conservative vs Experimenting	-.1467	-.1377	.4294	.5397
Q-2 Dependent vs Self-Sufficient	-.2019	-.3590	.3072	.2725
Q-3 Uncontrolled vs Self-Controlled	-.0903	-.2000	.2846	.4721
Q-4 Stable vs Tense	.0731	.2720	-.1609	-.3541

Results Related to the *Minnesota Importance Questionnaire* (MIQ) Male Occupational Grouping, Graduate Population.

The analysis of MIQ scores for the male occupational grouping in the graduate population resulted in six discriminant functions with $P < .05$. The first two functions are plotted as Figure 24.

Two clusters were formed along function one with carpentry (3), automotive mechanics (4), diesel mechanics (6), farm equipment mechanics (9), and agritechnology (11) forming the cluster with the higher placement. The second cluster was composed of power and home electricity (2), mechanical drafting and design (5), and machine shop (7).

FIGURE 24
PLOT OF THE MALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MIQ SCORES IN THE GRADUATE POPULATION



X = FUNCTION 1: .3090(1) + (-.1339)(2) + (-.0099)(3) + (-.3265)(4) + (-.1715)(5) + (-.2392)(6) + .3201(7) + (-.0298)(8) + .0187(9) + .1637(10) + (-.0888)(11) + .0860(12) + .0154(13) + (-.1047)(14) + .3608(15) + .1018(16) + (-.0650)(17) + (-.0384)(18) + (-.2468)(19) + .0884(20) + (-.1865)(21) + .3044(22) + .2060(23) + (-.1654)(24) + .0300(25) + (-.1475)(26) + (-.2566)(27) + .0948(28) + .1607(29) + (-.0291)(30)

Y = FUNCTION 2: .0169(1) + (-.3527)(2) + (-.0919)(3) + .2006(4) + (-.0357)(5) + .0323(6) + .0726(7) + .3256(8) + (-.2607)(9) + .0293(10) + .2415(11) + .1876(12) + .1852(13) + .0249(14) + .1065(15) + (-.0152)(16) + (-.3434)(17) + (-.0977)(18) + .1854(19) + (-.1528)(20) + (-.2192)(21) + .2110(22) + .2570(23) + (-.2201)(24) + (-.0846)(25) + (-.0310)(26) + .0971(27) + .1460(28) + (-.1320)(29) + (-.2363)(30)

Discrimination along function two resulted in discrimination of agri-technology (11) from the rest of the male occupations by its high placement.

Combination of the first two functions graphically in Figure 24 resulted in the very tight clustering of power and home electricity (2), mechanical drafting and design (5), and machine shop (7).

Table 38 presents the weights applied to the original MIQ scales to form the first two discriminant functions and the correlations of these functions with the original MIQ variables. Additional information on this analysis may be found in Tables 19D and 19E in the Appendices.

Male Occupational Grouping, Employed Related Population.

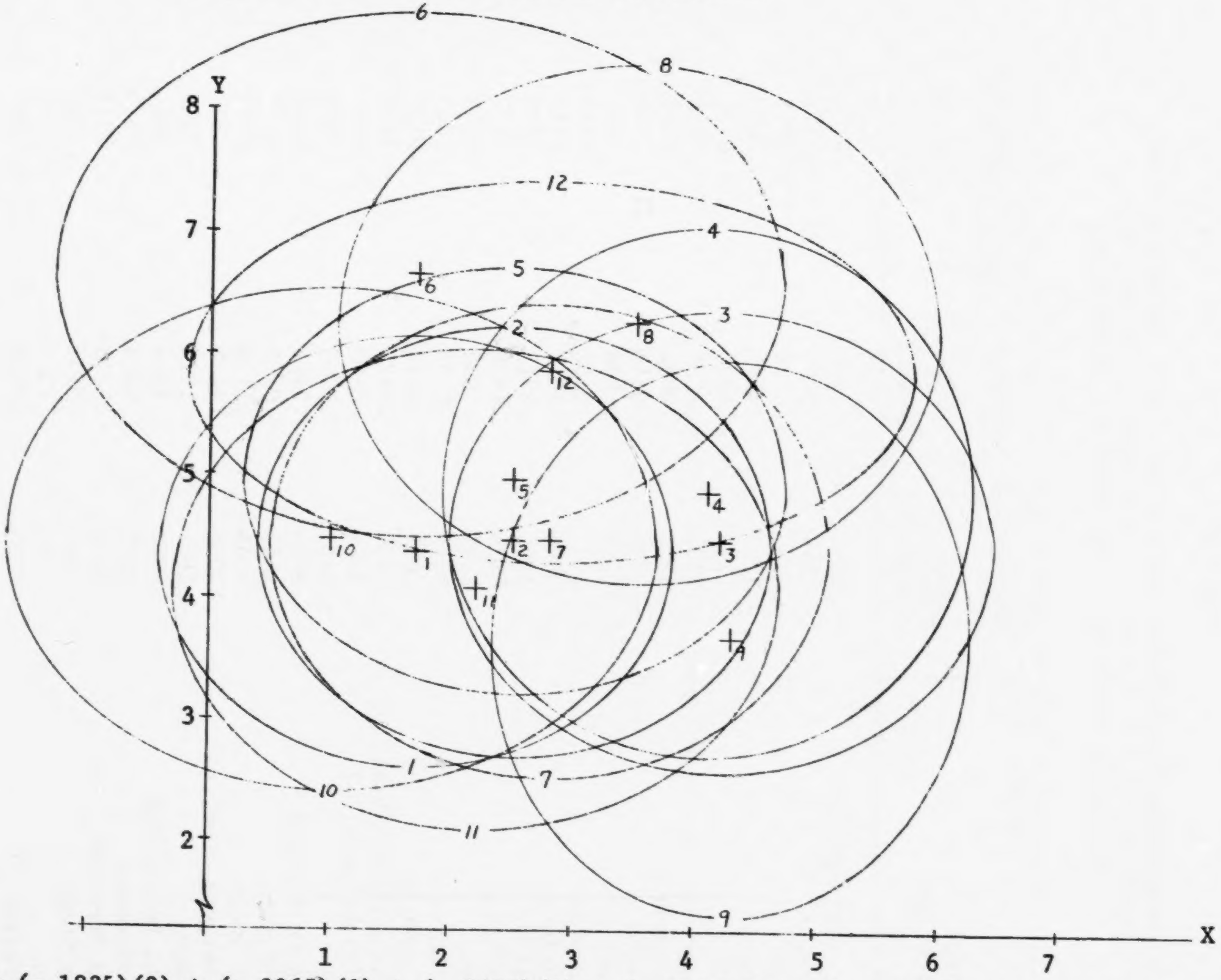
The analysis of MIQ scores for the male occupational grouping in the employed related population yielded four discriminant functions with $P < .05$. The first two functions are plotted as Figure 25.

Discrimination along function one resulted in four clusters. The first cluster was composed of carpentry (3), automotive mechanics (4), and farm equipment mechanics (9). The second was composed of machine shop (7) and optical technology (12), the third was composed of power and home electricity (2) and mechanical drafting and design (5), and the fourth of electronics (1) and diesel mechanics (6).

Function two discriminated diesel mechanics (6), welding (8), and optical technology (12) from the other occupations.

Combination of the first two functions graphically in Figure 25 resulted in two clusters although no occupations were totally discriminated from any other occupations. The first cluster was composed of carpentry (3), automotive mechanics (4), and farm equipment mechanics (9). The second cluster was composed of power and home electricity (2), mechanical drafting and design (5), machine shop (7), and agri-technology (11).

FIGURE 25
PLOT OF THE MALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MIQ SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: .3548(1) + (-.1835)(2) + (-.0965)(3) + (-.2455)(4) + (-.0567)(5) + (-.0567)(6) + .2994(7) + .0607(8) + (-.1457)(9) + .2657(10) + (-.0950)(11) + .0280(12) + (-.0152)(13) + (-.0210)(14) + .5302(15) + .0106(16) + .0417(17) + (-.0257)(18) + (-.2150)(19) + .1486(20) + .1958(21) + (-.0994)(22) + .0575(23) + (-.3019)(24) + (-.0993)(25) + (-.0148)(26) + (-.1529)(27) + (-.1240)(28) + .0627(29) + .1462(30)

Y = FUNCTION 2: (-.1781)(1) + .3245(2) + .1773(3) + (-.0159)(4) + .0819(5) + .0972(6) + .0082(7) + (-.2816)(8) + .2207(9) + .0217(10) + (-.0976)(11) + (-.0351)(12) + (-.3204)(13) + .1150(14) + (-.1626)(15) + .1364 (16) + (-.0391)(17) + (-.1327)(18) + (-.3680)(19) + .4844(20) + (-.0503)(21) + .0859(22) + (-.1440)(23) + .0441(24) + (-.1311)(25) + (-.0193)(26) + .0519(27) + .0453(28) + .2659(29) + (-.0065)(30)

TABLE 38

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MIQ SCORES FOR THE MALE OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
1. Ability Utilization	.3090	.0860	.0169	-.0135
2. Achievement	-.1339	-.0454	-.3527	-.0927
3. Activity	-.0099	-.0151	-.0919	-.0064
4. Advancement	-.3265	-.3865	.2006	.1428
5. Authority	-.1715	-.0245	-.0357	.0253
6. Company Practices and Policy	-.2392	-.2148	.0323	.0670
7. Compensation I	.3201	.0882	.0726	-.0191
8. Co-workers	-.0298	-.0346	.3256	.2126
9. Creativity	.0187	.1084	-.2607	.0770
10. Independence	.1637	.3392	.0293	.0502
11. Moral Values	-.0888	-.1053	.2415	.3606
12. Recognition	.0860	.0313	.1876	.0706
13. Responsibility	.0154	.1432	.1852	.1450
14. Security	-.1047	-.1932	.0249	.0499
15. Social Service	.3608	.3035	.1065	.1495
16. Social Status	.1018	.1424	-.0152	.0069
17. Supervision-Human Relation	-.0650	-.1127	-.3434	-.1533
18. Supervision-Technical	-.0384	-.0800	-.0977	-.1363
19. Variety	-.2468	-.1763	.1854	.2215
20. Working Conditions	.0884	.0365	-.1528	-.1527
21. Work Challenge	-.1865	-.0171	-.2192	-.2439
22. Company Image	.3044	.1176	.2110	.0755
23. Organizational Control	.2060	.2443	.2570	.1971
24. Feed Back	-.1654	-.1288	-.2201	-.1186
25. Physical Facilities	.0300	.1044	-.0846	-.2324
26. Work Relevance	-.1475	-.0868	-.0310	-.0872
27. Company Prestige	-.2566	-.1843	.0971	.1244
28. Company Goals	.0948	.0131	.1460	.0717
29. Closure	.1607	.2320	-.1320	-.1402
30. Compensation II	-.0291	.0131	-.2363	-.1769

Table 39 presents the weights applied to the original scale variables to form the first two discriminant functions and the correlation of these functions with the original MIQ variables. Additional information on this analysis may be found in Tables 20D and 20E in the Appendices.

TABLE 39

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MIQ SCORES FOR THE MALE OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

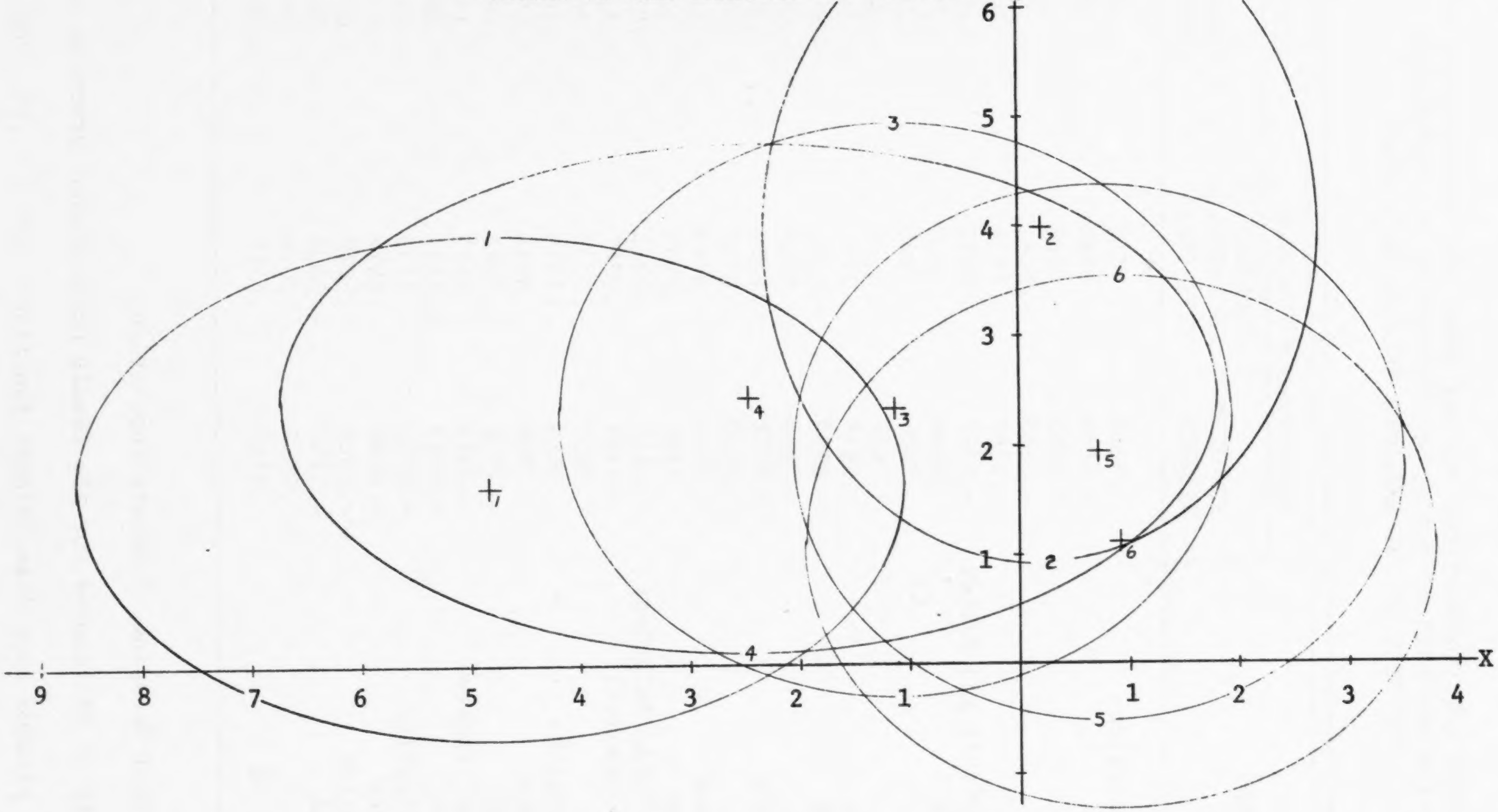
ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
1. Ability Utilization	.3548	.1700	-.1781	.1801
2. Achievement	-.1835	-.0583	.3245	.3359
3. Activity	-.0965	-.0068	.1773	.1837
4. Advancement	-.2455	-.2051	-.0159	.1916
5. Authority	-.0567	.1451	.0819	-.0136
6. Company Practices and Policy	-.0567	-.0932	.0972	.2470
7. Compensation I	.2994	.2700	.0082	.1897
8. Co-workers	.0607	.0865	-.2816	-.0859
9. Creativity	-.1457	.0126	.2207	-.0479
10. Independence	.2657	.3981	.0217	-.0761
11. Moral Values	-.0950	-.1211	-.0976	.0612
12. Recognition	.0280	.0918	-.0351	.1131
13. Responsibility	-.0152	.1416	-.3204	-.1605
14. Security	-.0210	-.0705	.1150	.2953
15. Social Service	.5302	.3789	-.1626	-.0532
16. Social Status	.0106	.2949	.1364	.0619
17. Supervision-Human Relations	.0417	.0111	-.0391	.1149
18. Supervision-Technical	-.0257	.0247	-.1327	.0571
19. Variety	-.2150	-.0728	-.3680	-.2924
20. Working Conditions	.1486	.2353	.4844	.4364
21. Work Challenge	.1958	.3556	-.0503	.0795
22. Company Image	-.0994	.0383	.0859	.1991
23. Organizational Control	.0575	.1645	-.1440	-.1240
24. Feed Back	-.3019	-.1627	.0441	.1312
25. Physical Facilities	-.0993	.1855	-.1311	.0310
26. Work Relevance	-.0148	.0514	-.0193	.1506
27. Company Prestige	-.1529	-.1022	.0519	.1075
28. Company Goals	-.1240	-.0028	.0453	.2174
29. Closure	.0627	.2079	.2659	.3178
30. Compensation II	.1462	.3118	-.0065	.1714

Female Occupational Grouping, Graduate Population.

The analysis of MIQ scores for the female occupational grouping in the graduate population yielded four discriminant functions with $P < .05$. The first two functions are plotted as Figure 26.

FIGURE 26

PLOT OF THE FEMALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MIQ SCORES IN THE GRADUATE POPULATION



X = FUNCTION 1: .1579(1) + (-.1969)(2) + (-.1270)(3) + .4050(4) + (-.1319)(5) + .0616(6) + .1834(7) + .1233(8) + .2837(9) + .0723(10) + (-.0536)(11) + .1584(12) + (-.0077)(13) + (-.0619)(14) + (-.5894)(15) + .0856(16) + .0638(17) + (-.2703)(18) + (-.0645)(19) + .0623(20) + (-.0095)(21) + .0711(22) + .0802(23) + (-.0733)(24) + (-.0813)(25) + .0630(26) + (-.1267)(27) + .1149(28) + .1128(29) + (-.2434)(30)

Y = FUNCTION 2: .1193(1) + (-.0577)(2) + .0946(3) + (-.2461)(4) + (-.2270)(5) + (-.2285)(6) + .0985(7) + (-.2530)(8) + .6618(9) + .0924(10) + (-.0965)(11) + .0720(12) + .0194(13) + .0633(14) + .1429(15) + .0036(16) + (-.0607)(17) + .0570(18) + (.3548)(19) + .1106(20) + .1096(21) + .0013(22) + (-.1389)(23) + .1051(24) + .1084(25) + (-.1373)(26) + (-.0815)(27) + .0406(28) + .1477(29) + .0393(30)

Discrimination along function one resulted in three clusters. The first cluster was composed of cosmetology (2), clerical training (5), and secretarial training (6). The second cluster was composed of medical lab assistant (4), and the third of practical nursing (1). Function two discriminated cosmetology (2) from the other five curricula.

Combination of the first two functions graphically in Figure 26 resulted in three clusters. The first was composed of dental assistant (3) and medical lab assistant (4); the second cluster included clerical training (5) and secretarial training (6), and the third included cosmetology (2).

Table 40 presents the weights applied to the original MIQ variables to yield the first two discriminant functions and the correlations of these functions with the original MIQ variables. Additional information on this analysis may be found in Tables 21D and 21E in the Appendices.

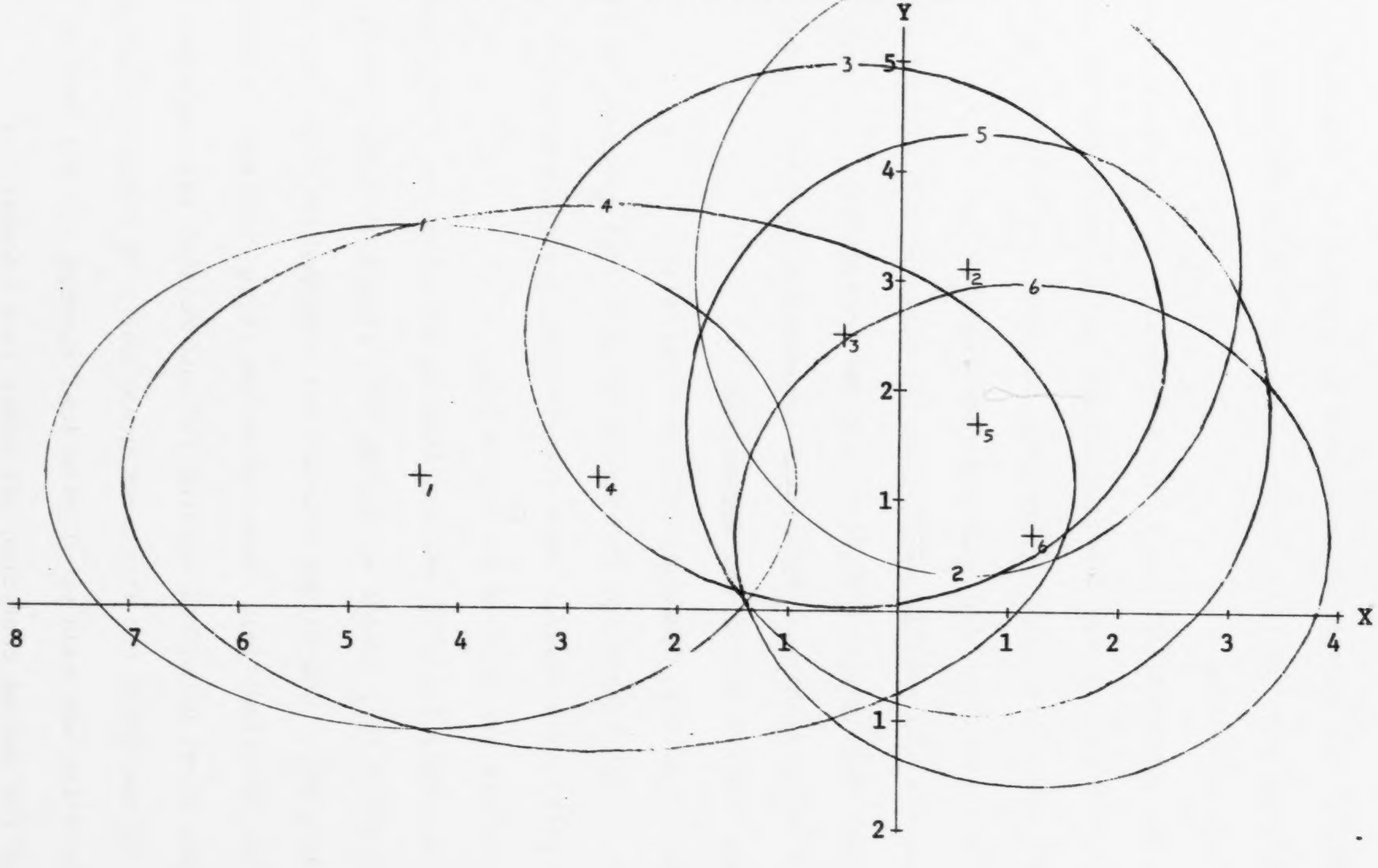
Female Occupational Grouping, Employed Related Population.

The analysis of MIQ scores for the female occupational grouping in the employed related population yielded four discriminant functions with $P < .05$. The first two functions are plotted as Figure 27.

Discrimination along function one resulted in two clusters. The first was composed of cosmetology (2), dental assistant (3), clerical training (5), and secretarial training (6). The second cluster was composed of practical nursing (1) and medical lab assistant (4). Discrimination along function two resulted in one cluster made up of practical nursing (1) and medical lab assistant (4).

Combination of the first two functions graphically in Figure 27 resulted in two clusters. The first was made up of practical nursing (1) and medical lab assistant (4), and the second contained the other four occupations.

FIGURE 27
PLOT OF THE FEMALE OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MIQ SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: .1647(1) + (-.2846)(2) + (-.1003)(3) + .4142(4) + (-.1003(5) + (-.0063)(6) + .1854(7) + .1182(8) + .2235(9) + .0898(10) + (-.0125)(11) + .1766(12) + (-.0455)(13) + (-.0693)(14) + (-.5668)(15) + .1243(16) + .1092(17) + (-.2350)(18) + (-.0607)(19) + .0393(20) + (-.0701)(21) + .1012(22) + .0506(23) + (-.0660)(24) + (-.0726)(25) + .1075(26) + (-.1253)(27) + .1358(28) + .1077(29) + (-.2487)(30)

Y = FUNCTION 2: .1998(1) + (-.2345)(2) + .2652(3) + (-.2261)(4) + (-.1502)(5) + (-.1441)(6) + .0260(7) + (-.0944)(8) + .4500 (9) + .2879(10) + (-.1399) (11) + .2601(12) + (-.0706)(13) + .0257(14) + .1807(15) + (-.1686)(16) + (-.1602) (17) + .0664(18) + (-.3337)(19) + .0431(20) + .1553(21) + .1362(22) + (-.1045)(23) + .1181(24) + .1295(25) + (-.0806)(26) + (-.2306)(27) + (-.0035)(28) + .0550(29) + (-.0339)(30)

TABLE 40

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MIQ SCORES FOR THE FEMALE OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
1. Ability Utilization	.1579	-.0799	.1193	.1702
2. Achievement	-.1969	-.2384	-.0577	.0872
3. Activity	-.1270	-.1961	.0946	.1039
4. Advancement	.4050	.5895	-.2461	-.1357
5. Authority	-.1319	.1533	-.2270	.0636
6. Company Practices and Policy	.0616	.1336	-.2285	-.2837
7. Compensation I	.1834	.3657	.0985	.0901
8. Co-workers	.1233	.1531	-.2530	-.1640
9. Creativity	.2837	.3572	.6618	.5189
10. Independence	.0723	.2811	.0924	.3210
11. Moral Values	-.0536	-.1084	-.0965	-.1960
12. Recognition	.1584	.3842	.0720	.1785
13. Responsibility	-.0077	.2095	.0194	.3284
14. Security	-.0619	.1419	.0633	.0256
15. Social Service	-.5894	-.6725	.1429	.1502
16. Social Status	.0856	.2718	.0036	.1682
17. Supervision-Human Relations	.0638	.1386	-.0607	-.1446
18. Supervision-Technical	-.2703	-.0719	.0570	-.0149
19. Variety	-.0645	.0582	-.3548	-.1605
20. Working Conditions	.0623	.2196	.1106	.0977
21. Work Challenge	-.0095	.2197	.1096	.2161
22. Company Image	.0711	.0807	.0013	-.0429
23. Organizational Control	.0802	.3350	-.1389	.2573
24. Feed Back	-.0733	.0988	.1051	.1428
25. Physical Facilities	-.0813	.0935	.1084	.3234
26. Work Relevance	.0630	.0496	-.1373	-.0007
27. Company Prestige	-.1267	-.2235	-.0815	.0675
28. Company Goals	.1149	.1158	.0406	-.0440
29. Closure	.1128	.1418	.1477	.3286
30. Compensation II	-.2434	.2208	.0393	.1197

Table 41 presents the weights applied to the original MIQ scales to yield the first two discriminant functions and the correlations of these functions with original MIQ variables. Additional information on this analysis may be found in Tables 22D and 22E in the Appendices.

TABLE 41

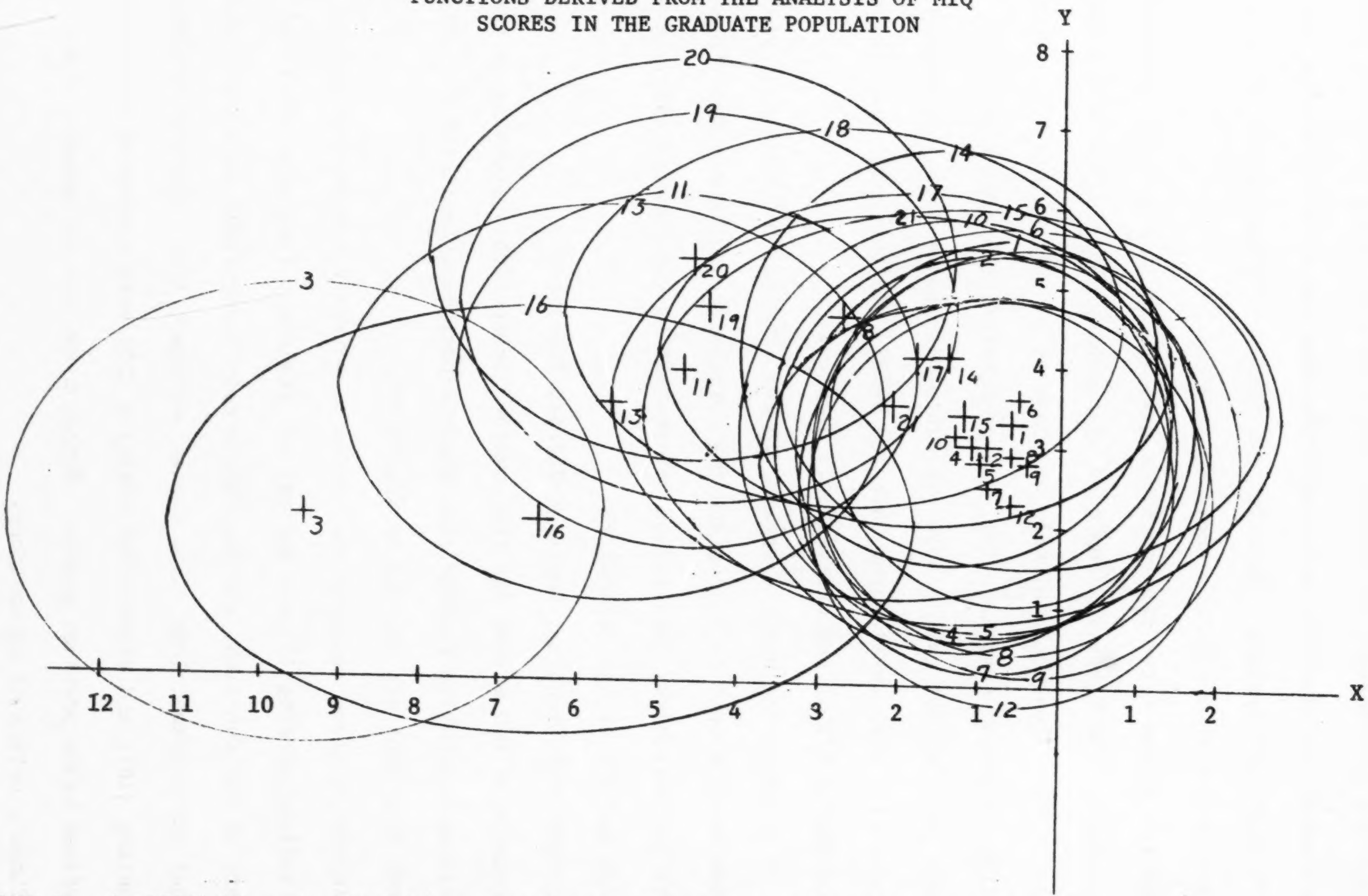
FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MIQ SCORES FOR THE FEMALE OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION 1		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
1. Ability Utilization	.1647	-.1035	.1998	.0834
2. Achievement	-.2846	-.2667	-.2345	-.0432
3. Activity	-.1003	-.1735	.2652	.2066
4. Advancement	.4142	.6033	-.2261	-.1496
5. Authority	-.1003	.1592	-.1502	.1498
6. Company Practices and Policy	-.0063	.1472	-.1441	-.2558
7. Compensation I	.1854	.3822	.0260	.0064
8. Co-workers	.1182	.2015	-.0944	-.0698
9. Creativity	.2235	.3432	.4500	.3922
10. Independence	.0898	.2833	.2879	.5097
11. Moral Values	-.0125	-.1001	-.1399	-.2782
12. Recognition	.1766	.3983	.2601	.2861
13. Responsibility	-.0455	.1828	-.0706	.2838
14. Security	-.0693	.1329	.0257	-.0428
15. Social Service	-.5668	-.6694	.1807	.1123
16. Social Status	.1243	.3042	-.1686	.1157
17. Supervision-Human Relations	.1092	.1821	-.1602	-.1517
18. Supervision-Technical	-.2350	-.0505	.0664	.0224
19. Variety	-.0607	.0881	-.3337	-.0860
20. Working Conditions	.0393	.2248	.0431	.0617
21. Work Challenge	-.0701	.2319	.1553	.2879
22. Company Image	.1012	.0965	.1362	.0106
23. Organizational Control	.0506	.3285	-.1045	.2330
24. Feed Back	-.0660	.1101	.1181	.1576
25. Physical Facilities	-.0726	.1123	.1295	.3491
26. Work Relevance	.1075	.0646	-.0806	.0489
27. Company Prestige	-.1253	-.2621	-.2306	-.0987
28. Company Goals	.1358	.1306	-.0035	-.0680
29. Closure	.1077	.1421	.0550	.2247
30. Compensation II	-.2487	.2255	-.0339	.0311

Combined Occupational Grouping, Graduate Population.

The analysis of MIQ scores for the combined occupational grouping in the graduate population yielded ten discriminant functions with $P < .05$. The first two functions are plotted as Figure 28.

FIGURE 28
PLOT OF THE COMBINED OCCUPATIONS ON THE FIRST TWO DISCRIMINANT FUNCTIONS DERIVED FROM THE ANALYSIS OF MIQ SCORES IN THE GRADUATE POPULATION



X = FUNCTION 1: (-.0784)(1) + (-.2611)(2) + .0478(3) + .2680(4) + .0888(5) + (.0639)(6) + .1793(7) + (-.1310)(8) + .3250(9) + (-.0382)(10) + (-.1214)(11) + .0252(12) + .0544(13) + .0741(14) + (-.6513)(15) + .0466(16) + .3556(17) + (-.1242)(18) + (-.1527)(19) + (-.0338)(20) + .0882(21) + (-.0702)(22) + .0492(23) + .0109(24) + .0781(25) + .1243(26) + (-.0051)(27) + (-.1328)(28) + .0836(29) + (-.0719)(30)

Y = FUNCTION 2: .1628(1) + (-.1643)(2) + (-.1886)(3) + .4398(4) + (-.2030)(5) + .1735(6) + .0416(7) + .3020(8) + (-.0495)(9) + .1434(10) + .1155(11) + .2144(12) + (-.0073)(13) + (-.2032)(14) + (-.1272)(15) + .1144(16) + (-.2102)(17) + (-.2582)(18) + .0376(19) + .0794(20) + (-.1087)(21) + .1703(22) + .0377(23) + (-.1216)(24) + (-.2374)(25) + .0467(26) + (-.1508)(27) + .2822(28) + .0460(29) + (-.2484)(30)

Function one essentially discriminated two clusters on the basis of sex. The first cluster was composed of the six curricula containing primarily females. The second cluster contained the male curricula plus the three curricula containing both males and females. Function two failed to discriminate among curricula to the extent that clusters could be defined.

Combination of the first two functions graphically in Figure 28 resulted in three clusters. The first was composed of practical nursing (3) and medical lab assistant (16). The second cluster was made up of cosmetology (11), dental assistant (13), clerical training (19), and secretarial training (20). The third cluster included the twelve male curricula with sales (17), accounting (18), and data processing (21) overlapping both the female and the male clusters but falling more nearly within the overall male cluster.

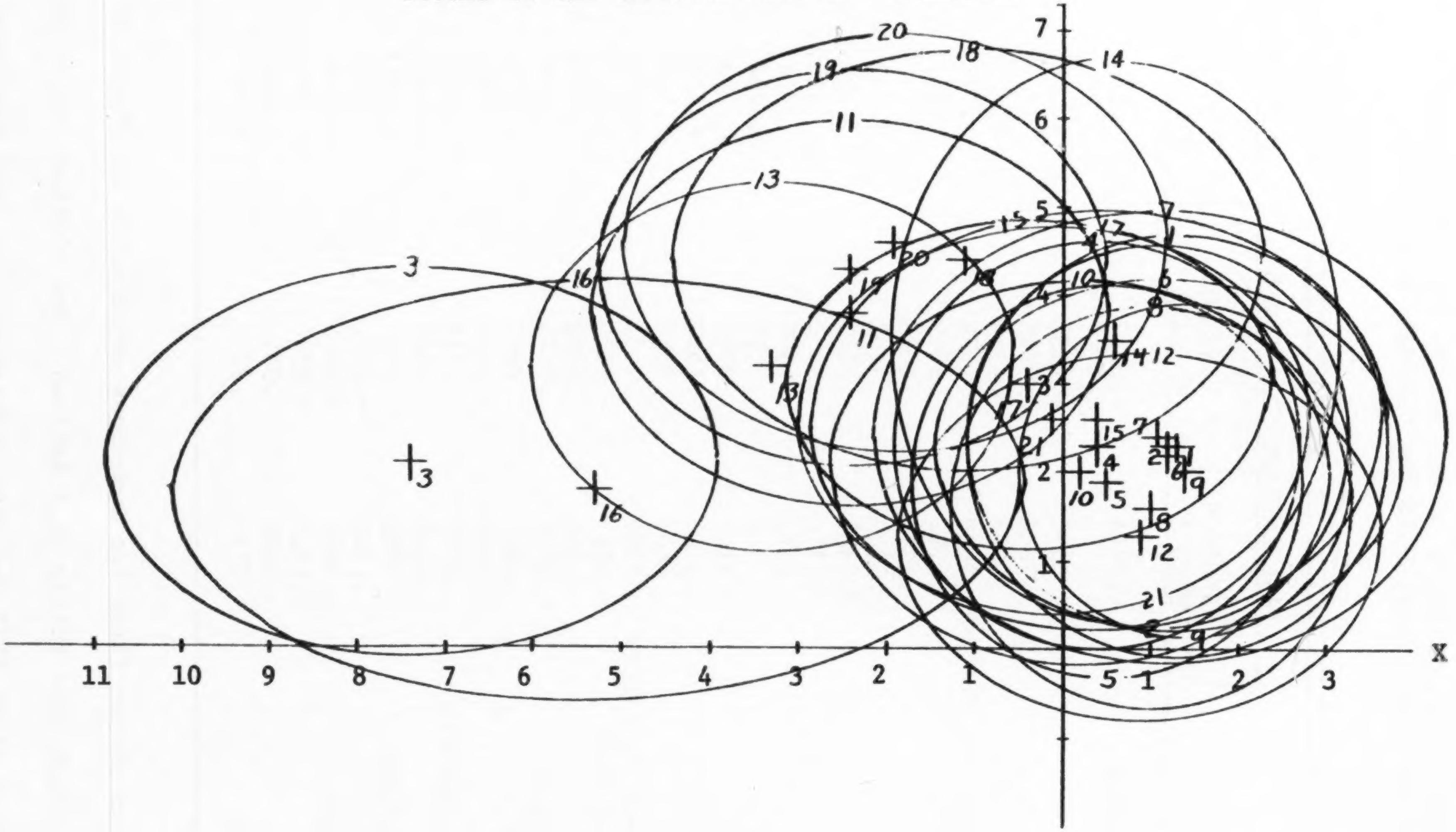
Table 42 presents the weights applied to the original MIQ scales to yield the first two discriminant functions and the correlations of these functions with the original MIQ variables. Additional information on this analysis may be found in Tables 23D and 23E in the Appendices.

Combined Occupational Grouping, Employed Related Population.

The analysis of MIQ scores for the combined occupational grouping in the employed related population yielded nine discriminant functions with $P < .05$. The first two functions are plotted as Figure 29.

Discrimination along function one tended to separate occupations according to sex. Practical nursing (3) and medical lab assistant (16) were clustered at the lower end of the function, and the twelve male occupations were clustered at the higher end. Cosmetology (11), dental assistant (13), clerical training (19), accounting (18), and secretarial training (20) were clustered between the extremes defined by the previous groups. Function two did not result in any clearly defined clusters of occupations.

FIGURE 29
PLOT OF THE COMBINED OCCUPATIONS ON THE FIRST TWO DISCRIMINANT
FUNCTIONS DERIVED FROM THE ANALYSIS OF MIQ
SCORES IN THE EMPLOYED RELATED POPULATION



X = FUNCTION 1: (-.0290)(1) + (-.2949)(2) + (-.0240)(3) + .3424)(4) + .0398(5) + (-.0667)(6) + .1940(7) + (-.0637)(8) + .3099 (9) + (-.0476)(10) + (-.0765)(11) + .0884(12) + .0314(13) + .0471(14) + (-.6575)(15) + .0780(16) + .3210(17) + (.0753)(18) + (-.1295)(19) + (-.0027)(20) + .0394(21) + (-.0386)(22) + .0155(23) + (-.0441)(24) + .0099 (25) + .1736(26) + .0030(27) + (-.0824)(28) + .0905(29) + (-.1311)(30)

Y = FUNCTION 2: .1899(1) + (-.1014)(2) + (-.1437)(3) + .3470(4) + (-.2595(5) + .1099(6) + .0803(7) + .3003(8) + (-.0938)(9) + .2404(10) + .071(11) + .1504(12) + (-.0539)(13) + (-.2452)(14) + (-.0602)(15) + .1271(16) + (-.2170)(17) + (-.2840)(18) + .0690(19) + .0463(20) + (-.1332)(21) + .2106(22) + .0374(23) + (-.0060)(24) + (-.2160)(25) + (-.0355)(26) + (-.1946)(27) + .3217(28) + .0697(29) + (.2465)(30)

TABLE 42

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MIQ SCORES FOR THE COMBINED OCCUPATIONAL GROUPING IN THE GRADUATE POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION I		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
1. Ability Utilization	-.0784	-.2717	.1628	.1298
2. Achievement	-.2611	-.3959	-.1643	.0968
3. Activity	.0478	-.1452	-.1886	-.1198
4. Advancement	.2680	.3945	.4398	.4242
5. Authority	.0888	.3239	-.2030	-.1386
6. Company Practices and Policy	-.0639	-.1988	.1735	.3885
7. Compensation I	.1793	.3609	.0416	.0892
8. Co-workers	-.1310	-.1673	.3020	.3560
9. Creativity	.3250	.3132	-.0495	.0283
10. Independence	-.0382	.2215	.1434	.0523
11. Moral Values	-.1214	-.3661	.1155	.2888
12. Recognition	.0252	.2385	.2144	.2387
13. Responsibility	.0544	.2105	-.0073	-.0138
14. Security	.0741	.0968	-.2032	.0899
15. Social Service	-.6513	-.7539	-.1272	-.0358
16. Social Status	.0466	.2613	.1144	.0785
17. Supervision-Human Relations	.3556	.0462	-.2102	.1367
18. Supervision-Technical	-.1242	-.0879	-.2582	-.0304
19. Variety	-.1527	.0268	.0376	.0338
20. Working Conditions	-.0338	.0474	.0794	.1643
21. Work Challenge	.0882	.2907	-.1087	-.0606
22. Company Image	-.0702	-.1656	.1703	.2603
23. Organizational Control	.0492	.3249	.0377	.0150
24. Feed Back	.0109	.0341	-.1216	.1017
25. Physical Facilities	.0781	.2761	-.2374	-.2377
26. Work Relevance	.1243	-.0592	.0467	.1494
27. Company Prestige	-.0051	-.2092	-.1508	-.0537
28. Company Goals	-.1328	-.2348	.2822	.3725
29. Closure	.0836	.0030	.0460	.0926
30. Compensation II	-.0719	.3218	-.2484	-.0702

The combination of the first two functions graphically in Figure 29 resulted in three clusters which were fairly well defined. One cluster, which included the male occupations plus sales (17) and data processing (21), was separated from a second cluster composed of practical nursing (3) and medical lab assistant (16).

A third cluster composed of the remaining female occupations plus accounting (18) fell between and overlapped to some extent the first two clusters.

Table 43 presents the weights applied to the original MIQ scales to yield the first two discriminant functions and the correlations of these functions with the original MIQ variables. Additional information on this analysis may be found in Tables 24D and 24E in the Appendices.

TABLE 43

FUNCTION WEIGHTS AND CORRELATIONS FOR THE FIRST TWO DISCRIMINANT FUNCTIONS IN THE ANALYSIS OF MIQ SCORES FOR THE COMBINED OCCUPATIONAL GROUPING IN THE EMPLOYED RELATED POPULATION

ORIGINAL INSTRUMENT SCALES	DISCRIMINANT FUNCTION I		DISCRIMINANT FUNCTION 2	
	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE	FUNCTION WEIGHTS	CORRELATION OF FUNCTION WITH SCALE
1. Ability Utilization	-.0290	-.2313	.1899	.1310
2. Achievement	-.2949	-.3558	-.1014	.1077
3. Activity	-.0240	-.1373	-.1437	-.0958
4. Advancement	.3424	.5088	.3470	.2808
5. Authority	.0398	.3146	-.2595	-.2198
6. Company Practices and Policy	-.0667	-.0600	.1099	.3198
7. Compensation I	.1940	.4008	.0803	.0309
8. Co-workers	-.0637	-.0510	.3003	.3734
9. Creativity	.3099	.3645	-.0938	-.0255
10. Independence	-.0476	.1979	.2402	.1047
11. Moral Values	-.0765	-.2776	.1071	.2748
12. Recognition	.0884	.3328	.1504	.1459
13. Responsibility	.0314	.2336	-.0539	-.0739
14. Security	.0471	.1542	-.2452	.0004
15. Social Service	-.6575	-.7469	-.0602	.0296
16. Social Status	.0780	.3005	.1271	.0457
17. Supervision-Human Relations	.3210	.1576	-.2170	.0595
18. Supervision-Technical	-.0753	-.0159	-.2840	-.0943
19. Variety	-.1295	.0555	.0690	.0313
20. Working Conditions	-.0027	.1321	.0463	.0985
21. Work Challenge	.0394	.3113	-.1332	-.1243
22. Company Image	-.0386	-.0701	.2106	.2353
23. Organizational Control	.0155	.3349	.0374	-.0175
24. Feed Back	-.0441	.0821	-.0060	.1052
25. Physical Facilities	.0099	.2554	-.2160	-.2742
26. Work Relevance	.1736	.0164	-.0355	.0968
27. Company Prestige	.0030	-.1984	-.1946	-.1125
28. Company Goals	-.0824	-.1167	.3217	.3556
29. Closure	.0905	.0462	.0697	.1265
30. Compensation II	-.1311	.3298	-.2465	-.1346

Part Two Conclusions

Discriminant function analysis appears to be a powerful technique for uncovering potential differences between groups of people who are successful in different occupations through the use of standardized test instruments. The multivariate approach used in discriminant analysis maximizes the differences between groups of people using a weighted combination of the instrument scales included in the analysis. In all of the analyses conducted, the results indicated highly significant differences between groups of individuals who were successful in different occupations based on the pre-enrollment test data; both among female groups and among male groups. The largest differences were found using the MVII.

As was true in Part One, differences among the female groups were more apparent than differences among the male groups. These relative differences are readily seen by observing the figures which plot the locations and distributions of discriminant functions scores for the male occupations and those for the female occupations.

When all of the occupational groups were combined, without reference to the sex of the individuals who took part in the training, it became apparent that the sex composition of the groups is related to the scores that they receive on each of the standardized tests used in the project. In most cases those occupational groups which enrolled primarily males clustered together, and those occupational groups which enrolled primarily females clustered together, while those groups which enrolled both males and females without either sex clearly predominant fell somewhere in between.

An examination of the figures on which the discriminant function scores were plotted for the various occupations indicates that the use of such figures as vocational counseling aids may represent a useful tool in the hands of a counselor. With these figures and the accompanying equations which were used to generate the figures, counselors could take an individual's scores obtained from a given instrument and calculate his discriminant function scores. These discriminant function scores could then be used to locate the individual on the plot represented on the appropriate figure. An individual then could visually see which groups he is most like based upon how close his plotted score is located to the center of each of the occupational groups. This knowledge of how similar he is to people who have been successful in the past would provide a meaningful piece of information which could be used by him in occupational decision making.

Due to the voluminous findings presented in this report concerning each of many different standardized test instruments, the reader should review the specific findings pertaining to the instrument or instruments of interest to him. The findings pertaining to the separate instruments tend to differ somewhat for each of the populations studied.

REFERENCES

Berdie, R. F., and others. Counseling and the Use of Tests: A Manual for the State-Wide Testing Programs of Minnesota, rev. ed. Minneapolis: University of Minnesota Press, 1962.

Clark, K. E., and Campbell, D. P. Minnesota Vocational Interest Inventory. New York: The Psychological Corporation, 1965.

Crites, J. O. "Measurement of Vocational Maturity in Adolescence: I. Attitude Test of the Vocational Development Inventory." Psychological Monographs: General and Applied, Vol. 79, No. 2, Whole No. 595. Washington: American Psychological Association, 1965.

Crites, J. O. The Maturity of Vocational Attitudes in Adolescence. Iowa City, Iowa: The University of Iowa, 1969.

Handbook Supplement for Form C of the Sixteen Personality Factor Questionnaire. Champaign, Illinois: The Institute of Personality and Ability Testing, 1962.

Joselyn, G. School Counselor's Handbook. St. Paul: Minnesota State-Wide Vocational Testing Program, State Department of Education, Division of Vocational Technical Education, not dated.

Manual for the General Aptitude Test Battery, Section III: Development. Washington, D.C.: Bureau of Employment Security, Manpower Administration, U.S. Department of Labor, 1970.

Nelson, H. F. Project MINI-SCORE Final Report. Minneapolis, Minnesota: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, March, 1972.

Nunnally, J. C., Jr. Psychometric Theory. New York: McGraw-Hill Co., Inc., 1967.

Parsons, F. Choosing a Vocation. Boston: Houghton Mifflin, 1909.

Prediger, D. J. Validation and Interpretation of Test Data Via Discriminant Analysis: Research Results with Vocational School Students. A paper presented at the 1969 national convention of the American Vocational Association.

Pucel, D. J. "The Centour Methodology Applied to Vocational Student Counseling and Admissions." Journal of Industrial Teacher Education, Vol. VII, No. 1 (Fall, 1969), pp. 5-12.

Pucel, D. J., Nelson, H. F., and Mohamed, D. M. The Ability of Standardized Tests to Predict Training Success and Employment Success. Minneapolis, Minnesota: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, March, 1972.

Pucel, D. J., Nelson, H. F., and Wheeler, D. N. *Differentiating Among Graduates of Vocational-Technical Curriculums*. Minneapolis, Minnesota: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, July, 1970.

Rulon, P. J., Tiedeman, D. V., Tatsouka, M. M., and Lagmuir, C. R. *Multivariate Statistics for Personnel Classification*. New York: John Wiley & Sons, Inc., 1967.

Tatsouka, M. M. *Discriminant Analyses, The Study of Group Differences*. Selected Topics in Advanced Statistics, No. 6. Champaign, Illinois: Institute for Personality and Ability Testing, 1970.

Tiedeman, D. V., and Rulon, P. J. "The Multiple Discriminant Function - A Symposium." *Harvard Educational Review*, Vol. XXI, No. 2 (Spring, 1951).

Weiss, D. J., Dawis R. V., England G. W., and Lofquist, L. H. *The Measurement of Vocational Needs* (Minnesota Studies in Vocational Rehabilitation: XVI). Minneapolis, Minnesota: Work Adjustment Project, Industrial Relations Center, University of Minnesota, 1964.

Weiss, D. J., Dawis, R. V., Lofquist, L. H., and England, G. W. *Instrumentation for the Theory of Work Adjustment* (Minnesota Studies in Vocational Rehabilitation: XXI). Minneapolis, Minnesota: Work Adjustment Project, Industrial Relations Center, University of Minnesota, 1966.

APPENDIX A

MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE GRADUATE GROUPS AND AMONG THE FEMALE GRADUATE GROUPS

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TABLE 1A

GATB SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS (GRADUATE GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
G-Intelligence	114.931 (11.305)	107.884 (12.464)	107.017 (11.979)	106.051 (12.852)	115.163 (10.480)	107.565 (12.123)	107.470 (11.830)
V-Verbal Aptitude	105.104 (10.225)	97.135 (10.212)	94.950 (10.619)	96.663 (10.996)	101.876 (10.241)	98.420 (10.310)	96.783 (10.576)
N-Numerical Aptitude	111.604 (12.495	106.357 (13.422)	105.122 (13.596)	103.137 (13.705)	111.805 (12.183)	105.043 (13.662)	106.627 (14.120)
S-Spatial Aptitude	123.233 (14.463)	117.729 (17.656)	119.293 (15.553)	117.295 (17.362)	127.502 (14.352)	118.420 (15.998)	117.392 (16.001)
P-Form Perception	117.916 (17.751)	115.681 (18.177)	114.519 (14.741)	114.610 (17.943)	122.550 (17.370)	115.638 (17.859)	114.343 (17.546)
Q-Clerical Perception	114.238 (11.742)	110.546 (11.898)	108.133 (11.405)	110.145 (12.829)	114.904 (12.591)	109.377 (11.213)	109.422 (11.882)
K-Motor Coordination	101.451 (18.815)	101.657 (15.783)	96.558 (15.745)	99.059 (17.164)	103.590 (17.575)	92.623 (15.417)	97.422 (16.516)

NOTE: Standard Deviations in Parentheses

TABLE 1A (Continued)

GATB SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS (GRADUATE GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
G-Intelligence	101.260 (12.542)	107.486 (11.606)	111.524 (10.928)	107.713 (12.009)	113.114 (14.780)	23.902**
V-Verbal Aptitude	92.957 (10.350)	96.681 (8.610)	101.408 (9.657)	97.539 (10.360)	107.257 (14.411)	22.892**
N-Numerical Aptitude	99.488 (14.019)	107.306 (13.317)	105.922 (11.533)	107.739 (12.718)	111.314 (13.968)	16.127**
S-Spatial Aptitude	113.020 (17.818)	115.806 (17.913)	122.262 (14.672)	111.774 (16.470)	115.029 (15.544)	13.953**
P-Form Perception	112.378 (18.551)	115.861 (17.203)	119.204 (15.476)	111.983 (16.603)	119.857 (23.042)	5.922**
Q-Clerical Perception	107.756 (12.765)	109.944 (12.769)	112.553 (11.546)	110.652 (11.292)	115.429 (11.723)	7.355**
K-Motor Coordination	98.315 (15.794)	96.403 (13.299)	102.709 (20.559)	97.070 (14.993)	108.286 (19.574)	5.448**

NOTE: Standard Deviations in Parentheses
**Significant at .01

TABLE 2A

GATB SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE FEMALE CURRICULUMS (GRADUATE GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
G-Intelligence	111.328 (11.478)	105.614 (11.744)	107.596 (12.087)	121.286 (13.676)	105.185 (11.810)	112.371 (11.792)	41.559**
V-Verbal Aptitude	107.363 (11.340)	100.530 (10.557)	105.981 (11.825)	116.327 (12.316)	100.272 (10.104)	107.226 (11.097)	50.707**
N-Numerical Aptitude	111.002 (12.486)	105.422 (12.203)	105.462 (15.139)	117.245 (13.777)	107.982 (12.991)	114.146 (13.032)	28.189**
S-Spatial Aptitude	113.430 (16.398)	112.639 (15.827)	111.423 (16.204)	127.714 (15.294)	109.261 (16.700)	112.133 (15.390)	13.305**
P-Form Perception	125.766 (17.593)	128.273 (16.261)	129.904 (18.209)	131.735 (20.937)	121.951 (17.077)	125.233 (16.685)	7.911**
Q-Clerical Perception	125.061 (14.967)	122.932 (12.761)	124.192 (16.777)	128.918 (17.642)	122.051 (14.738)	126.489 (14.493)	7.431**
K-Motor Coordination	112.507 (17.564)	109.819 (16.146)	113.288 (13.763)	114.388 (15.877)	111.254 (15.652)	117.942 (17.957)	14.668**

NOTE: Standard Deviations in Parentheses
**Significant at .01

TABLE 3A

MVII SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
H-1 Mechanical	15.505 (4.126)	16.570 (4.015)	14.994 (4.272)	17.123 (3.759)	14.661 (4.574)	17.783 (3.888)	17.127 (3.830)
H-2 Health Service	4.262 (3.196)	3.121 (2.930)	2.597 (2.590)	2.230 (2.019)	3.323 (2.888)	2.594 (2.907)	2.398 (2.457)
H-3 Office Work	3.203 (2.905)	2.377 (2.284)	3.088 (3.106)	2.204 (2.359)	3.227 (3.008)	1.928 (2.178)	2.741 (2.811)
H-4 Electronics	13.733 (2.698)	12.937 (2.941)	6.745 (2.817)	9.667 (3.249)	7.693 (3.508)	9.580 (3.314)	8.675 (3.136)
H-5 Food Service	3.960 (2.969)	4.179 (2.966)	3.713 (2.911)	4.186 (2.746)	4.586 (2.863)	4.174 (3.125)	3.747 (2.632)
H-6 Carpentry	3.535 (2.417)	5.159 (2.571)	11.309 (2.696)	7.184 (2.976)	8.064 (3.224)	7.420 (3.117)	8.151 (3.146)
H-7 Sales - Office	3.401 (2.512)	2.396 (1.918)	2.199 (2.109)	1.887 (1.830)	3.522 (2.494)	1.768 (2.059)	1.795 (1.817)
H-8 Clean Hands	3.446 (1.921)	3.179 (1.949)	3.586 (1.783)	3.063 (1.814)	3.705 (1.846)	2.623 (1.783)	3.458 (2.014)
H-9 Outdoors	8.589 (2.380)	9.280 (2.304)	9.735 (2.282)	9.749 (2.211)	8.558 (2.365)	9.899 (1.964)	9.819 (2.186)

NOTE: Standard Deviations in Parentheses

TABLE 3A (Continued)

MVII SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
H-1 Mechanical	15.894 (4.614)	16.903 (3.958)	18.243 (3.069)	11.365 (5.170)	12.314 (5.624)	27.793**
H-2 Health Service	2.862 (2.645)	2.139 (2.770)	3.126 (2.436)	4.009 (3.521)	5.286 (3.683)	13.795**
H-3 Office Work	2.559 (2.731)	2.444 (2.006)	1.408 (1.562)	5.652 (4.972)	3.257 (3.230)	17.667**
H-4 Electronics	8.209 (3.365)	9.639 (3.337)	10.583 (2.872)	7.191 (3.593)	8.371 (3.979)	85.308**
H-5 Food Service	4.346 (3.080)	4.264 (2.888)	4.087 (2.426)	5.409 (3.976)	4.657 (3.029)	3.244**
H-6 Carpentry	7.594 (3.090)	7.472 (3.076)	6.136 (3.202)	7.530 (2.960)	6.514 (3.807)	74.302**
H-7 Sales - Office	2.339 (1.977)	2.111 (1.983)	2.485 (2.118)	3.504 (2.352)	4.486 (2.884)	20.888**
H-8 Clean Hands	3.346 (2.011)	3.375 (1.872)	2.330 (1.653)	4.443 (2.185)	3.486 (2.228)	9.406**
H-9 Outdoors	9.358 (2.412)	9.847 (2.205)	9.893 (1.960)	8.339 (2.460)	8.286 (2.257)	11.255**

NOTE: Standard Deviations in Parentheses
**Significant at .01

TABLE 4A

MVII SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE FEMALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
H-1 Mechanical	.992 (1.523)	1.940 (2.943)	1.154 (1.786)	2.735 (4.127)	1.305 (2.096)	.840 (1.875)	17.203**
H-2 Health Service	15.752 (2.527)	7.912 (4.184)	12.154 (3.664)	16.020 (4.003)	6.269 (4.232)	6.709 (4.351)	447.616**
H-3 Office Work	5.908 (3.310)	9.446 (4.594)	9.365 (4.005)	5.204 (3.416)	14.158 (3.952)	14.490 (4.144)	379.899**
H-4 Electronics	1.615 (1.438)	2.807 (1.985)	2.115 (1.937)	2.510 (2.459)	2.871 (1.891)	2.516 (1.751)	31.257**
H-5 Food Service	10.393 (3.380)	10.213 (3.789)	9.288 (3.648)	10.041 (3.786)	8.410 (3.243)	7.926 (3.236)	43.409**
H-6 Carpentry	5.110 (2.112)	6.157 (2.360)	5.442 (2.164)	4.939 (2.495)	5.452 (2.215)	5.341 (2.239)	8.098**
H-7 Sales - Office	8.130 (2.785)	6.422 (2.657)	7.269 (2.672)	6.776 (2.718)	5.820 (2.508)	5.950 (2.437)	56.015**
H-8 Clean Hands	4.399 (1.802)	5.241 (1.892)	5.327 (1.790)	3.776 (1.771)	6.481 (2.034)	6.330 (1.911)	94.922**
H-9 Outdoors	3.974 (1.916)	3.707 (2.090)	3.577 (1.613)	3.918 (2.326)	3.456 (1.928)	3.313 (1.806)	8.254**

NOTE: Standard Deviations in Parentheses
**Significant at .01

TABLE 5A

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
A - Aloof vs Outgoing	5.495 (2.114)	5.696 (2.113)	5.133 (2.064)	5.378 (1.976)	5.127 (2.098)	5.478 (1.860)	5.307 (2.073)
B - Dull vs Bright	4.178 (1.319)	3.802 (1.388)	3.713 (1.348)	3.770 (1.318)	4.287 (1.298)	4.000 (1.260)	3.735 (1.402)
C - Emotional vs Mature	7.297 (1.929)	7.874 (2.208)	7.304 (2.189)	7.384 (2.168)	7.287 (2.322)	7.754 (2.348)	7.319 (2.129)
E - Submissive vs Dominant	4.411 (2.397)	4.024 (2.310)	4.160 (2.239)	4.265 (2.096)	4.474 (2.235)	4.377 (2.365)	4.494 (2.256)
F - Glum vs Enthusiastic	6.366 (2.634)	6.754 (2.450)	6.530 (2.664)	6.446 (2.397)	6.837 (2.472)	6.145 (2.516)	6.428 (2.482)
G - Casual vs Conscientious	6.782 (2.030)	6.841 (2.024)	6.978 (2.116)	6.966 (2.086)	6.434 (2.180)	7.246 (1.928)	6.530 (2.011)
H - Timid vs Adventurous	5.951 (2.221)	5.908 (2.174)	5.718 (2.377)	5.426 (2.031)	5.757 (2.198)	5.551 (1.989)	5.536 (2.140)
I - Tough vs Sensitive	2.876 (1.975)	2.536 (1.948)	2.635 (1.826)	2.871 (1.793)	2.829 (1.808)	2.435 (1.711)	2.819 (1.853)

NOTE: Standard Deviations in Parentheses

TABLE 5A (Continued)

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
A - Aloof vs Outgoing	5.236 (2.156)	5.264 (1.636)	5.311 (1.985)	6.113 (2.235)	6.200 (1.997)	3.086**
B - Dull vs Bright	3.437 (1.372)	3.792 (1.310)	4.204 (1.324)	3.591 (1.382)	4.314 (1.409)	7.688**
C - Emotional vs Mature	7.461 (2.264)	7.611 (2.280)	7.058 (1.909)	7.174 (2.079)	7.029 (2.121)	1.739
E - Submissive vs Dominant	4.303 (2.260)	3.625 (2.248)	4.058 (1.939)	3.896 (2.162)	5.429 (2.160)	2.516**
F - Glum vs Enthusiastic	6.429 (2.589)	6.319 (2.522)	6.534 (2.114)	6.400 (2.740)	6.400 (3.219)	.886
G - Casual vs Conscientious	6.622 (2.148)	7.514 (1.792)	6.476 (2.052)	7.461 (1.948)	6.543 (2.119)	3.951**
H - Timid vs Adventurous	5.720 (2.034)	5.528 (2.035)	6.039 (2.173)	5.870 (2.024)	5.486 (2.063)	1.693
I - Tough vs Sensitive	2.862 (1.897)	2.403 (1.758)	2.825 (1.963)	2.991 (2.166)	2.971 (1.790)	1.286

NOTE: Standard Deviations in Parentheses
**Significant at .01

TABLE 5A (Continued)

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
L - Trustful vs Suspecting	5.515 (1.971)	5.145 (1.928)	5.199 (1.899)	5.475 (1.974)	5.610 (2.082)	5.203 (2.104)	5.271 (1.940)
M - Conventional vs Eccentric	5.777 (1.956)	5.560 (2.128)	4.834 (1.857)	5.360 (1.936)	5.865 (2.011)	5.203 (2.146)	5.211 (2.143)
N - Simple vs Sophisticated	5.233 (2.097)	5.010 (2.002)	5.044 (1.696)	5.251 (1.726)	5.124 (1.997)	5.232 (1.750)	4.904 (2.107)
O - Confident vs Insecure	4.020 (1.793)	4.010 (1.738)	4.282 (2.143)	4.499 (1.921)	4.120 (1.915)	4.536 (2.153)	4.331 (2.013)
Q_1- Conservative vs Experimenting	5.361 (2.395)	4.638 (2.085)	4.083 (2.100)	4.580 (2.052)	4.669 (2.234)	4.377 (2.023)	4.229 (2.271)
Q_2- Dependent vs Self-sufficient	7.614 (1.806)	7.522 (1.800)	7.586 (1.921)	7.380 (1.734)	7.574 (1.810)	7.667 (1.642)	7.108 (1.751)
Q_3- Uncontrolled vs Self Control	6.658 (2.379)	7.188 (2.165)	6.851 (2.551)	6.707 (2.286)	6.546 (2.334)	7.101 (1.911)	6.627 (2.370)
Q_4- Stable vs Tense	5.262 (2.353)	5.058 (2.171)	5.470 (2.242)	5.416 (2.128)	5.614 (2.294)	5.232 (2.230)	5.494 (2.044)

NOTE: Standard Deviations in Parentheses

TABLE 5A (Continued)

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
L - Trustful vs Suspecting	5.425 (2.191)	5.431 (2.068)	5.466 (1.862)	5.000 (1.906)	5.543 (2.133)	1.403
M - Conventional vs Eccentric	5.122 (1.995)	4.847 (1.866)	5.369 (2.000)	5.165 (1.835)	5.057 (1.392)	4.730**
N - Simple vs Sophisticated	5.126 (2.064)	4.514 (2.090)	5.107 (2.004)	5.235 (1.912)	5.143 (1.801)	1.250
O - Confident vs Insecure	4.429 (2.239)	4.194 (2.180)	4.563 (1.993)	4.313 (2.058)	4.229 (1.767)	1.790*
Q_1- Conservative vs Experimenting	4.539 (2.103)	4.194 (1.911)	5.184 (2.066)	4.617 (2.195)	4.486 (2.188)	4.785**
Q_2- Dependent vs Self-sufficient	7.323 (1.824)	7.236 (1.968)	7.913 (1.547)	7.252 (1.849)	7.143 (1.665)	2.162*
Q_3- Uncontrolled vs Self Control	6.524 (2.252)	6.708 (2.440)	7.272 (2.327)	6.800 (2.306)	6.457 (2.305)	1.872*
Q_4- Stable vs Tense	5.661 (2.213)	5.861 (2.297)	5.184 (2.028)	5.670 (2.339)	5.029 (2.162)	1.721

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 6A

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE FEMALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
A - Aloof vs Outgoing	8.138 (2.105)	7.807 (2.135)	7.885 (1.833)	7.837 (2.304)	7.223 (1.872)	7.507 (1.850)	12.797**
B - Dull vs Bright	4.173 (1.370)	3.703 (1.454)	3.865 (1.358)	4.286 (1.369)	3.833 (1.342)	4.158 (1.358)	8.017**
C - Emotional vs Mature	7.403 (2.283)	6.855 (2.045)	6.635 (2.368)	7.388 (1.824)	6.786 (2.253)	7.005 (2.933)	4.068**
E - Submissive vs Dominant	3.377 (2.120)	3.514 (2.008)	4.096 (2.079)	4.306 (2.510)	3.427 (2.140)	3.497 (2.678)	2.234*
F - Glum vs Enthusiastic	7.509 (2.372)	7.594 (2.311)	7.365 (2.409)	7.224 (2.266)	6.895 (2.424)	7.101 (3.578)	3.620**
G - Casual vs Conscientious	7.316 (1.848)	7.418 (1.922)	6.558 (2.127)	6.510 (2.161)	7.479 (1.921)	7.556 (2.799)	3.937**
H - Timid vs Adventurous	6.051 (2.276)	5.586 (2.004)	5.500 (2.044)	5.653 (2.314)	5.319 (1.988)	5.391 (2.686)	6.525**
I - Tough vs Sensitive	7.096 (2.200)	7.209 (2.070)	7.365 (2.258)	7.041 (2.500)	7.243 (2.136)	7.529 (2.034)	2.989*

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 6A (Continued)

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE FEMALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	
L - Trustful vs Suspecting	4.815 (1.940)	5.249 (1.920)	5.635 (1.847)	5.592 (1.968)	5.452 (1.819)	5.391 (1.961)	7.993**
M - Conventional vs Eccentric	5.644 (1.839)	5.799 (1.803)	6.077 (2.076)	5.959 (1.732)	5.722 (1.835)	5.871 (1.807)	1.416
N - Simple vs Sophisticated	4.409 (1.735)	4.775 (1.675)	5.019 (1.777)	4.816 (1.704)	4.632 (1.883)	4.689 (1.778)	2.664*
O - Confident vs Insecure	4.642 (1.983)	4.723 (1.905)	5.115 (1.854)	4.449 (1.926)	4.902 (2.028)	4.843 (1.954)	1.665
Q1- Conservative vs Experimenting	4.623 (2.152)	4.201 (2.038)	4.135 (1.990)	5.510 (2.623)	4.024 (1.988)	3.871 (2.004)	12.799**
Q_2- Dependent vs Self-sufficient	6.792 (1.590)	6.723 (1.653)	6.346 (1.792)	6.918 (1.566)	6.432 (1.535)	6.447 (1.612)	4.801**
Q_3- Uncontrolled vs Self Control	7.081 (2.295)	6.285 (2.447)	5.596 (2.251)	6.755 (2.546)	5.842 (2.391)	6.023 (2.210)	19.249**
Q4- Stable vs Tense	5.796 (2.155)	6.594 (2.044)	6.692 (1.976)	6.163 (1.951)	6.584 (2.242)	6.467 (2.156)	9.431**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 7A

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS (GRADUATE GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
1. Ability Utilization	19.020 (2.766)	19.705 (2.723)	19.586 (2.763)	19.343 (2.918)	19.414 (2.640)	19.986 (2.648)	19.133 (2.802)
2. Achievement	18.337 (2.705)	18.845 (2.904)	18.961 (2.868)	18.455 (2.835)	18.892 (2.838)	19.246 (2.614)	18.470 (2.945)
3. Activity	15.965 (2.916)	16.763 (3.203)	16.945 (3.356)	16.093 (3.146)	15.948 (2.854)	16.725 (3.321)	16.530 (3.366)
4. Advancement	20.223 (2.967)	20.101 (3.157)	19.856 (3.171)	19.115 (3.317)	20.327 (2.912)	19.609 (3.116)	20.133 (3.391)
5. Authority	11.698 (3.056)	12.048 (3.369)	12.354 (3.397)	11.861 (3.468)	11.590 (3.060)	11.667 (3.513)	12.277 (3.574)
6. Company Prac. and Pol.	18.965 (3.026)	19.010 (3.026)	18.729 (3.167)	18.293 (3.190)	18.857 (3.245)	18.638 (3.010)	18.645 (3.118)
7. Compensation I	17.465 (3.027)	17.546 (3.104)	18.061 (2.862)	17.665 (3.085)	17.606 (2.891)	17.464 (3.350)	17.596 (3.087)
8. Co-workers	18.183 (3.355)	18.140 (3.372)	18.558 (3.050)	17.994 (3.347)	18.327 (3.261)	17.971 (2.900)	18.199 (3.417)
9. Creativity	14.911 (3.039)	15.203 (3.134)	15.320 (3.190)	15.281 (3.249)	15.386 (3.308)	15.275 (2.823)	14.783 (3.404)
10. Independence	10.545 (3.246)	11.005 (3.508)	11.851 (4.061)	11.517 (3.553)	10.972 (3.880)	10.899 (4.023)	10.928 (3.357)

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 7A (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
1. Ability Utilization	19.075 (3.119)	19.472 (2.838)	19.282 (2.861)	19.139 (2.896)	18.857 (2.580)	1.453
2. Achievement	18.547 (3.086)	18.431 (2.533)	18.903 (2.868)	18.400 (2.874)	18.257 (2.832)	1.479
3. Activity	16.280 (3.182)	16.056 (3.768)	16.612 (3.215)	16.339 (2.973)	16.029 (3.024)	2.119*
4. Advancement	19.406 (3.498)	19.319 (3.331)	19.874 (3.443)	19.513 (3.535)	20.343 (3.749)	3.799**
5. Authority	12.024 (3.559)	11.764 (3.329)	12.583 (3.558)	12.209 (3.458)	11.829 (3.434)	1.240
6. Company Prac and Pol	18.488 (3.096)	18.903 (3.420)	18.359 (2.903)	18.330 (3.425)	20.143 (3.173)	2.122*
7. Compensation I	17.429 (3.343)	17.736 (3.021)	17.194 (3.084)	17.330 (2.868)	17.971 (3.276)	.816
8. Co-workers	17.630 (3.547)	18.681 (3.364)	18.282 (3.095)	18.348 (3.549)	18.429 (3.681)	1.230
9. Creativity	14.602 (3.295)	14.653 (3.127)	15.379 (3.091)	15.157 (3.696)	13.600 (3.265)	2.058*
10. Independence	11.366 (3.630)	11.181 (3.825)	10.806 (3.845)	12.000 (4.085)	9.200 (3.216)	3.312**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 7A (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
11. Moral Value	18.693 (3.938)	18.411 (3.871)	18.547 (4.001)	17.824 (3.880)	18.470 (3.905)	19.130 (3.726)	18.199 (4.213)
12. Recognition	15.574 (3.010)	16.077 (3.384)	16.177 (3.413)	16.016 (3.433)	16.299 (3.411)	15.174 (3.374)	16.596 (3.549)
13. Responsibility	14.188 (2.776)	15.116 (2.937)	15.083 (2.957)	14.808 (3.091)	14.713 (2.938)	15.203 (2.682)	15.000 (3.155)
14. Security	20.861 (2.966)	21.159 (3.083)	20.575 (2.881)	20.473 (3.040)	20.873 (3.044)	20.986 (3.056)	20.922 (3.189)
15. Social Service	15.465 (3.298)	16.266 (3.097)	16.746 (3.220)	16.459 (3.442)	15.896 (3.576)	16.159 (3.368)	15.916 (3.289)
16. Social Status	12.614 (3.283)	13.382 (3.266)	14.055 (3.460)	13.253 (3.642)	13.510 (3.698)	12.928 (3.655)	13.410 (3.595)
17. Supervision (Human Relations)	18.584 (3.013)	18.841 (3.099)	19.144 (2.918)	18.398 (3.088)	18.813 (2.979)	18.855 (2.761)	18.759 (3.151)
18. Supervision (Technical)	17.550 (2.639)	17.971 (2.839)	18.072 (2.700)	17.535 (3.002)	17.522 (2.861)	17.957 (2.342)	18.181 (2.808)
19. Variety	14.792 (3.190)	15.222 (3.520)	15.343 (3.180)	14.683 (3.432)	15.032 (3.329)	14.290 (3.519)	15.669 (3.640)
20. Working Conditions	18.752 (3.263)	18.676 (3.609)	19.221 (3.087)	19.053 (3.180)	19.171 (3.183)	19.348 (3.364)	19.651 (3.033)

NOTE: Standard Deviations in Parentheses

TABLE 7A (Continued)

MIO SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
11. Moral Value	17.528 (3.993)	18.528 (4.344)	18.447 (3.653)	19.157 (3.270)	18.086 (4.655)	2.682**
12. Recognition	16.091 (3.679)	15.861 (2.780)	15.330 (3.934)	16.235 (3.467)	16.314 (4.588)	1.749
13. Responsibility	14.567 (3.127)	14.778 (3.449)	14.961 (2.987)	15.339 (3.212)	13.429 (3.238)	2.434**
14. Security	20.311 (3.218)	20.875 (2.945)	20.515 (3.080)	20.148 (3.047)	22.029 (2.695)	2.334**
15. Social Service	15.370 (3.618)	16.250 (3.752)	15.621 (3.361)	16.200 (3.267)	15.771 (4.691)	3.127**
16. Social Status	13.476 (3.439)	13.375 (2.855)	12.825 (3.934)	13.617 (3.508)	12.429 (3.632)	2.141*
17. Supervision (Human Relations)	18.587 (3.028)	19.000 (2.551)	18.825 (2.666)	17.887 (3.600)	18.771 (3.144)	1.732
18. Supervision (Technical)	17.575 (2.931)	17.417 (2.710)	17.806 (2.737)	17.035 (3.151)	17.514 (3.617)	1.884*
19. Variety	14.693 (3.337)	14.875 (3.528)	15.932 (3.604)	15.478 (3.705)	14.971 (3.690)	2.629**
20. Working Conditions	19.181 (3.233)	19.111 (2.725)	18.689 (2.849)	18.696 (3.500)	19.286 (3.313)	1.371

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 7A (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
21. Work Challenge	14.594 (3.743)	14.734 (3.334)	15.470 (3.652)	14.741 (3.779)	15.056 (3.829)	14.623 (3.439)	15.253 (3.674)
22. Company Image	18.421 (3.149)	18.483 (3.168)	18.967 (3.011)	18.394 (3.197)	18.462 (3.254)	18.696 (2.697)	18.205 (3.086)
23. Organizational Control	13.901 (3.006)	14.188 (3.384)	14.530 (3.316)	14.392 (3.211)	14.024 (3.217)	14.449 (3.132)	14.482 (3.302)
24. Feedback	16.153 (3.153)	16.435 (3.171)	16.381 (3.081)	15.988 (3.009)	16.558 (2.870)	16.319 (2.893)	16.181 (3.026)
25. Physical Facilities	16.762 (3.659)	16.908 (3.781)	17.116 (3.339)	17.412 (3.848)	17.291 (4.111)	17.623 (3.370)	17.578 (3.724)
26. Work Relevance	15.470 (3.353)	16.261 (3.370)	16.215 (3.111)	15.653 (3.207)	16.610 (3.238)	15.942 (3.412)	15.970 (3.311)
27. Company Prestige	17.599 (3.328)	17.884 (3.142)	17.657 (3.227)	17.178 (3.207)	17.801 (3.166)	17.783 (3.347)	17.380 (3.148)
28. Company Goals	16.010 (3.289)	16.372 (3.270)	16.635 (3.271)	16.020 (3.463)	16.498 (3.404)	16.217 (3.698)	15.994 (3.553)
29. Closure	16.584 (3.031)	17.155 (3.365)	17.718 (3.612)	17.384 (3.255)	17.363 (3.405)	18.536 (3.094)	16.988 (3.539)
30. Compensation II	17.406 (3.473)	16.923 (3.505)	17.818 (3.163)	17.244 (3.667)	17.088 (3.378)	17.275 (3.884)	17.422 (3.619)

NOTE: Standard Deviations in Parentheses

TABLE 7A (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
21. Work Challenge	15.311 (4.151)	14.889 (3.594)	14.592 (3.521)	14.174 (3.688)	14.857 (3.405)	1.576
22. Company Image	18.161 (3.322)	19.125 (2.843)	17.786 (2.926)	18.348 (3.075)	18.514 (3.559)	1.500
23. Organizational Control	13.807 (3.299)	14.375 (3.178)	13.913 (3.181)	14.757 (3.450)	12.343 (3.077)	2.486**
24. Feedback	16.354 (3.150)	15.861 (2.703)	16.058 (3.035)	15.843 (3.111)	16.600 (3.867)	1.063
25. Physical Facilities	17.177 (3.827)	17.764 (3.102)	17.379 (3.850)	16.313 (3.930)	15.971 (3.527)	1.840*
26. Work Relevance	15.807 (3.363)	15.542 (3.058)	15.884 (3.499)	15.452 (3.396)	15.000 (3.956)	2.528**
27. Company Prestige	17.102 (3.514)	16.889 (3.392)	18.136 (3.081)	17.591 (3.395)	16.971 (3.294)	2.033*
28. Company Goals	16.051 (3.495)	16.111 (3.392)	15.767 (3.344)	16.322 (3.736)	16.114 (4.136)	.916
29. Closure	17.366 (3.359)	16.958 (3.321)	16.903 (3.485)	17.383 (3.415)	16.257 (4.361)	2.622**
30. Compensation II	17.339 (3.640)	17.778 (3.194)	17.291 (3.403)	16.539 (2.954)	17.457 (2.984)	1.331

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 8A

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE FEMALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
1. Ability Utilization	20.762 (2.927)	21.048 (2.977)	19.808 (2.529)	20.980 (2.689)	20.283 (2.982)	20.413 (3.022)	3.979**
2. Achievement	20.941 (2.588)	20.434 (2.839)	19.731 (3.036)	20.265 (2.490)	19.806 (2.862)	19.980 (2.866)	10.901**
3. Activity	17.472 (3.407)	17.024 (3.566)	16.346 (2.828)	16.918 (3.033)	16.419 (3.236)	16.471 (3.454)	7.198**
4. Advancement	16.234 (4.204)	18.960 (3.421)	17.731 (3.906)	17.184 (3.983)	19.223 (3.419)	19.874 (3.580)	64.820**
5. Authority	9.949 (2.962)	10.711 (3.542)	9.519 (3.352)	9.837 (3.319)	10.775 (3.097)	10.518 (3.322)	5.222**
6. Company Prac and Pol	19.576 (3.357)	19.438 (3.451)	19.385 (3.315)	19.347 (2.697)	19.062 (3.418)	20.476 (3.147)	6.905**
7. Compensation I	14.859 (3.628)	16.892 (3.473)	16.173 (3.388)	16.347 (3.351)	16.561 (3.416)	16.798 (3.274)	23.259**
8. Co-workers	18.906 (3.377)	19.165 (3.325)	18.308 (3.090)	18.122 (3.789)	19.514 (3.512)	19.759 (3.476)	6.372**
9. Creativity	12.682 (3.152)	15.920 (3.577)	13.038 (3.029)	13.082 (3.493)	14.151 (2.992)	14.166 (3.098)	38.697**
10. Independence	9.218 (3.485)	11.418 (4.110)	9.942 (3.733)	9.449 (3.055)	10.978 (3.575)	10.306 (3.445)	18.860**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 8A (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE FEMALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistnat	Clerical	Secretarial	F Test
11. Moral Value	20.916 (3.485)	20.149 (3.365)	19.942 (4.354)	20.388 (3.593)	19.699 (3.964)	20.774 (3.724)	7.777**
12. Recognition	13.849 (3.823)	16.181 (3.753)	15.404 (3.345)	14.653 (3.789)	16.082 (3.598)	15.724 (3.497)	26.294**
13. Responsibility	13.399 (2.909)	15.125 (2.918)	13.558 (2.953)	13.490 (2.583)	14.234 (2.983)	14.123 (2.858)	13.100**
14. Security	19.967 (3.385)	20.639 (2.889)	20.519 (2.867)	20.531 (3.049)	20.566 (3.103)	20.647 (3.080)	3.340**
15. Social Service	22.454 (2.821)	19.815 (3.551)	19.538 (3.178)	19.980 (3.976)	18.588 (3.590)	18.628 (3.788)	88.577**
16. Social Status	11.230 (3.801)	12.980 (3.723)	11.577 (3.806)	11.286 (3.260)	12.924 (3.566)	12.426 (3.756)	14.584**
17. Supervision (Human Relations)	18.230 (3.262)	18.418 (3.394)	18.654 (2.956)	18.388 (2.964)	18.802 (3.343)	19.008 (3.199)	3.986**
18. Supervision (Technical)	18.242 (2.893)	17.884 (3.091)	17.731 (2.787)	17.694 (2.717)	18.015 (2.992)	17.865 (2.887)	1.273
19. Variety	14.792 (3.716)	14.671 (3.666)	12.846 (3.517)	14.449 (3.680)	14.900 (3.541)	15.260 (3.767)	2.656*
20. Working Conditions	18.354 (3.609)	19.647 (3.110)	18.788 (2.865)	19.796 (3.109)	19.425 (3.314)	19.449 (3.404)	8.999**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 8A (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE FEMALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
21. Work Challenge	12.560 (3.794)	14.229 (3.714)	13.654 (3.955)	13.306 (3.970)	14.118 (3.967)	13.506 (3.911)	10.569**
22. Company Image	19.193 (3.344)	19.470 (3.218)	19.135 (3.199)	19.041 (2.483)	19.470 (3.362)	19.631 (3.260)	1.323
23. Organizational Control	11.866 (3.024)	13.984 (3.311)	12.577 (2.824)	12.673 (2.749)	13.223 (2.863)	13.283 (2.946)	22.404**
24. Feedback	15.957 (3.138)	16.719 (2.964)	15.827 (2.929)	15.531 (2.807)	16.441 (3.105)	16.241 (3.034)	3.270**
25. Physical Facilities	15.022 (4.175)	16.590 (4.098)	15.173 (3.869)	16.878 (3.982)	15.893 (4.173)	15.284 (4.061)	7.346**
26. Work Relevance	16.216 (3.462)	16.414 (3.423)	16.327 (2.861)	15.633 (3.100)	16.476 (3.475)	16.410 (3.547)	.771
27. Company Prestige	19.122 (3.603)	18.602 (3.614)	17.481 (3.641)	19.367 (3.438)	17.575 (3.423)	18.139 (3.723)	11.853**
28. Company Goals	17.440 (3.560)	17.892 (3.664)	17.288 (3.316)	16.694 (3.077)	17.940 (3.646)	18.053 (3.675)	3.045**
29. Closure	16.902 (3.640)	18.506 (3.433)	17.942 (3.528)	17.041 (2.872)	17.697 (3.237)	17.365 (3.461)	8.280**
30. Compensation II	14.806 (3.739)	16.365 (3.707)	15.596 (3.315)	16.082 (3.402)	15.929 (3.910)	16.043 (3.752)	8.963**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 9A

VDI, MSAT SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
VDI Scale	37.876	37.077	36.619	36.608	37.526	38.304	36.711
	(4.036)	(5.064)	(4.915)	(4.672)	(4.110)	(3.912)	(4.563)
MSAT Scale	31.535	27.387	24.277	24.486	30.206	26.458	24.328
	10.257	10.299	8.543	8.840	9.133	10.123	8.314

NOTE: Standard Deviations in Parentheses

TABLE 9A (Continued)

VDI, MSAT SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
VDI Scale	35.705 (5.272)	36.903 (3.746)	38.913 (4.520)	37.009 (4.568)	38.114 (3.991)	5.590**
MSAT Scale	22.505 8.070	24.591 7.847	30.623 9.923	25.337 9.617	33.857 11.434	16.953**

NOTE: Standard Deviations in parentheses
**Significant at .01

TABLE 10A

VDI, MSAT SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE FEMALE CURRICULUMS
(GRADUATE GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
VDI Scale	39.937	37.904	39.500	40.163	37.098	38.701	36.085**
	(3.156)	(3.836)	(3.665)	(3.430)	(4.197)	(3.548)	
MSAT Scale	32.258	26.355	28.026	41.933	24.676	31.643	43.652**
	10.356	9.917	8.651	11.762	8.879	10.333	

NOTE: Standard Deviations in parentheses
**Significant at .01

APPENDIX B

MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE EMPLOYED RELATED GROUPS AND AMONG THE FEMALE EMPLOYED RELATED GROUPS

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TABLE 1B

GATB SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG MALE CURRICULUMS (EMPLOYED RELATED GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
G-Intelligence	115.549 (12.204)	108.057 (11.592)	106.609 (11.992)	106.531 (13.645)	115.927 (9.677)	108.500 (14.362)	105.647 (12.146)
V-Verbal Aptitude	105.961 (12.154)	97.092 (8.971)	94.281 (11.586)	95.585 (11.101)	102.244 (10.177)	97.800 (10.511)	94.735 (10.346)
N- Numerical Aptitude	111.431 (12.266)	106.414 (13.356)	105.188 (14.105)	104.700 (14.130)	113.085 12.748)	105.150 (14.110)	105.309 (12.646)
S-Spatial Aptitude	124.824 (13.084)	119.126 (16.010)	119.219 (14.814)	118.885 (16.417)	126.585 (14.630)	123.350 (16.067)	115.221 (16.750)
P-Form Perception	115.373 (18.998)	116.310 (17.864)	116.078 (13.924)	114.915 (16.742)	122.427 (14.930)	118.400 (17.620)	111.706 (19.575)
Q-Clerical Perception	113.275 (10.872)	111.874 (11.839)	107.641 (12.386)	111.208 (13.361)	114.256 (11.366)	108.600 (8.580)	108.338 (12.116)
K-Motor Coordination	97.745 (23.529)	100.241 (18.809)	97.266 (19.736)	97.046 (16.762)	105.488 (17.557)	95.750 (15.075)	96.721 (18.463)

NOTE: Standard Deviations in Parentheses

TABLE 1B (Continued)

GATB SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG MALE CURRICULUMS
(EMPLOYED RELATED GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
G-Intelligence	101.765 (9.570)	105.000 (11.493)	112.548 (11.310)	109.391 (13.859)	109.280 (12.595)	7.231**
V-Verbal Aptitude	91.176 (8.836)	93.870 (7.899)	104.161 (11.936)	99.435 (6.528)	105.080 (13.351)	9.663**
N-Numerical Aptitude	99.569 (12.659)	102.609 (10.820)	104.548 (10.557)	113.000 (14.604)	108.040 (10.632)	4.992**
S-Spatial Aptitude	117.961 (13.229)	118.261 (18.166)	121.871 (13.162)	110.348 (20.458)	113.440 (15.711)	3.855**
P-Form Perception	113.784 (19.170)	110.174 (15.228)	117.871 (14.617)	119.348 (14.877)	118.480 (23.193)	1.980*
Q-Clerical Perception	108.863 (13.522)	107.522 (11.281)	111.742 (12.105)	116.478 (12.540)	115.800 (12.285)	2.622**
K-Motor Coordination	95.843 (13.303)	94.435 (8.511)	97.871 (17.324)	102.304 (15.369)	108.200 (17.995)	2.389**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 2B

GATB SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG FEMALE CURRICULUMS (EMPLOYED RELATED GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
G-Intelligence	111.308 (11.955)	106.049 (11.655)	110.583 (10.890)	124.944 (11.329)	106.502 (11.971)	112.819 (11.540)	25.543**
V-Verbal Aptitude	107.057 (11.318)	100.466 (10.534)	108.833 (9.911)	118.611 (10.890)	101.559 (10.163)	107.152 (11.060)	27.773**
N-Numerical Aptitude	111.437 (13.039)	105.602 (11.602)	109.417 (11.100)	120.889 (12.266)	109.498 (12.534)	115.113 (12.340)	17.994**
S-Spatial Aptitude	112.967 (17.363)	113.612 (15.769)	114.750 (16.656)	130.139 (14.744)	109.574 (16.923)	112.313 (15.481)	10.717**
P-Form Perception	125.068 (17.681)	130.359 (16.549)	133.333 (16.481)	133.750 (18.733)	122.221 (16.999)	126.100 (16.210)	7.088**
Q-Clerical Perception	124.760 (15.222)	124.369 (12.314)	126.917 (18.773)	129.833 (16.789)	122.795 (14.981)	127.371 (14.297)	4.718**
K-Motor Coordination	111.949 (17.909)	109.971 (14.865)	115.208 (15.975)	115.833 (14.431)	111.825 (15.578)	117.485 (19.151)	6.949**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 3B

MVII SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS (EMPLOYED RELATED GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
H-1 Mechanical	16.076	16.529	15.516	17.638	15.098	18.350	17.044
	(3.973)	(3.833)	(3.690)	(3.155)	(4.658)	(3.843)	3.911
H-2 Health Service	4.980	3.046	2.391	2.346	3.195	2.750	2.324
	(3.667)	(3.072)	(2.646)	(2.141)	(2.579)	(2.918)	2.126
H-3 Office Work	2.745	2.322	2.703	2.269	3.366	1.650	3.088
	(2.599)	(2.355)	(2.611)	(2.188)	(3.191)	(1.663)	3.322
H-4 Electronics	13.075	13.080	6.703	9.585	7.634	8.700	8.750
	(2.933)	(2.329)	(2.408)	(3.105)	(3.512)	(2.922)	2.949
H-5 Food Service	4.078	3.874	3.219	3.938	4.451	3.850	3.676
	(2.999)	(2.519)	(2.485)	(2.271)	(3.060)	(2.300)	2.950
H-6 Carpentry	3.980	4.989	11.484	7.185	8.134	8.000	8.147
	(2.709)	(2.037	(2.357)	(2.922)	(3.431)	(3.671)	3.058
H-7 Sales-Office	3.098	2.437	2.047	1.638	3.232	1.950	1.779
	(2.147)	(1.987)	(1.988)	(1.628)	(2.290)	(2.259)	1.629
H-8 Clean Hands	2.922	3.195	3.484	3.169	3.622	2.500	3.544
	(1.683)	(2.022)	(1.727)	(1.818)	(1.890)	(1.701)	2.055
H-9 Outdoors	8.882	9.172	9.828	9.892	8.524	9.950	9.794
	(2.430)	(2.211)	(2.186)	(2.172)	(2.602)	(1.932)	2.162

NOTE: Standard Deviations in Parentheses

TABLE 3B (Continued)

MVII SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS (EMPLOYED RELATED GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
H-1 Mechanical	16.549 (3.781)	17.435 (3.160)	18.968 (2.689)	13.174 (4.619)	12.360 (5.604)	8.338**
H-2 Health Service	2.627 (2.254)	2.130 (2.492)	2.935 (2.620)	4.043 (2.931)	6.160 3.804	5.951**
H-3 Office Work	2.431 (2.788)	2.087 (1.756)	1.355 (1.427)	5.348 (4.716)	3.120 (3.432)	4.150**
H-4 Electronics	8.216 (2.887)	9.739 (3.467)	10.032 (3.016)	7.217 (3.643)	8.600 (3.697)	29.253**
H-5 Food Service	4.059 (2.580)	4.261 (2.454)	3.677 (2.039)	4.478 (2.728)	4.600 (3.215)	1.087*
H-6 Carpentry	8.196 (3.027)	7.391 (2.500)	6.871 (3.481)	8.609 (2.935)	6.560 (3.938)	24.911**
H-7 Sales-Office	1.980 (1.703)	1.870 (1.486)	1.871 (1.500)	3.348 (2.386)	4.560 (3.001)	8.410**
H-8 Clean Hands	3.510 (1.912)	2.913 (1.929)	2.484 (1.710)	4.174 (2.229)	3.520 (2.312)	2.089*
H-9 Outdoors	9.627 (2.254)	9.731 (2.490)	10.258 (1.751)	9.130 (1.714)	8.360 (2.361)	3.551**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 4B

MVII SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE FEMALE CURRICULUMS (EMPLOYED RELATED GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
H-1 Mechanical	1.027 (1.591)	1.990 (2.905)	1.042 (1.301)	2.167 (3.121)	1.160 (1.825)	.808 (1.830)	9.047**
H-2 Health Service	15.838 (2.407)	7.680 (4.183)	12.458 (3.635)	16.806 (2.122)	6.320 (4.395)	6.383 (4.155)	329.888**
H-3 Office Work	5.862 (3.320)	9.874 (4.515)	10.208 (3.203)	5.028 (3.291)	14.363 (3.763)	14.858 (3.850)	294.596**
H-4 Electronics	1.569 (1.416)	2.680 (1.875)	1.875 (1.624)	2.333 (2.255)	2.749 (1.718)	2.521 (1.730)	20.327**
H-5 Food Service	10.272 3.463	10.019 3.840	8.667 3.435	10.278 3.599	8.293 3.288	7.779 3.263	26.963**
H-6 Carpentry	5.091 (2.141)	6.282 (2.599)	5.583 (2.302)	4.694 (2.703)	5.571 (2.264)	5.308 (2.243)	4.935**
H-7 Sales-Office	8.053 (2.714)	6.049 (2.553)	7.125 (2.173)	7.139 (2.674)	5.804 (2.424)	5.860 (2.399)	41.883**
H-8 Clean Hands	4.380 (1.885)	5.262 (1.771)	5.333 (1.761)	3.917 (1.746)	6.498 (2.075)	6.485 (1.948)	64.641**
H-9 Outdoors	4.036 (1.949)	3.942 (2.137)	3.417 (1.586)	3.528 (2.184)	3.450 (1.902)	3.348 (1.795)	6.349**

NOTE: Standard Deviation in Parentheses
* Significant at .05
** Significant at .01

TABLE 5B

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-SCALE ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS (EMPLOYED RELATED GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
A-Aloof vs Outgoing	5.725 (2.324)	5.897 (2.277)	4.984 (2.149)	5.608 (2.021)	4.963 (1.972)	5.100 (1.518)	5.485 (2.141)
B-Dull vs Bright	4.176 (1.195)	3.989 (1.402)	3.575 (1.378)	3.862 (1.256)	4.183 (1.362)	4.150 (1.424)	3.618 (1.339)
C-Emotional vs Mature	7.078 (1.671)	7.667 (2.234)	7.500 (2.039)	7.585 (2.138)	6.841 (2.432)	7.150 (2.700)	7.294 (2.144)
E-Submissive vs Dominant	4.020 (2.267)	3.816 (2.207)	4.078 (2.291)	3.947 (2.147)	4.512 (2.295)	4.950 (2.724)	4.176 (2.192)
F-Glum vs Enthusiastic	6.373 (2.530)	6.575 (2.429)	6.578 (2.575)	6.754 (2.421)	6.732 (2.514)	6.200 (2.441)	6.485 (2.530)
G-Casual vs Conscientious	6.412 (2.368)	6.897 (1.983)	7.063 (2.007)	7.292 (1.878)	6.561 (2.178)	6.950 (2.038)	6.735 (2.190)
H-Timid vs Adventurous	5.980 (2.159)	5.644 (2.080)	5.828 (2.523)	5.600 (1.995)	5.866 (2.095)	6.050 (2.164)	5.706 (2.193)
I-Tough vs Sensitive	2.608 (2.237)	2.609 (1.937)	2.813 (1.825)	2.885 (1.719)	3.037 (1.760)	2.150 (1.755)	2.868 (1.876)
L-Trustful vs Suspecting	5.784 (2.239)	5.023 (1.917)	5.125 (1.956)	5.185 (1.747)	5.598 (2.165)	5.050 (2.282)	5.015 (2.026)
M-Conventional vs Eccentric	5.627 (2.068)	5.517 (2.062)	4.672 (1.928)	5.123 (1.880)	5.927 (1.968)	4.900 (2.125)	5.206 (2.263)
N-Simple vs Sophisticated	4.765 (2.187)	5.000 (2.085)	4.875 (1.609)	4.962 (1.625)	4.805 (2.111)	5.050 (1.538)	4.559 (1.888)

NOTE: Standard Deviations in Parentheses

TABLE 5B (Continued)

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-SCALE ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS (EMPLOYED RELATED GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
A-Aloof vs Outgoing	5.216 (2.185)	4.609 (1.270)	4.968 (2.456)	6.435 (2.332)	6.160 (1.724)	2.494**
B-Dull vs Bright	3.490 (1.391)	3.652 (1.584)	4.226 (1.454)	3.783 (1.204)	4.120 (1.481)	1.960*
C-Emotional vs Mature	7.490 (2.239)	7.870 (2.096)	6.935 (1.632)	6.652 (1.873)	6.960 (1.968)	1.400
E-Submissive vs Dominant	4.647 (2.261)	3.217 (2.255)	4.032 (1.722)	3.391 (2.271)	5.600 (2.102)	2.561**
F-Glum vs Enthusiastic	7.000 (2.441)	5.870 (2.302)	6.581 (1.945)	7.348 (2.790)	6.400 (3.000)	.666
G-Casual vs Conscientious	6.667 (2.066)	7.391 (1.901)	6.742 (2.221)	7.826 (1.825)	6.680 (2.174)	1.603
H-Timid vs Adventurous	5.804 (2.088)	4.913 (1.881)	6.258 (1.807)	6.217 (2.315)	5.600 (2.000)	.804
I-Tough vs Sensitive	2.843 (1.690)	2.652 (1.799)	2.226 (1.521)	2.435 (2.063)	3.120 (1.965)	.938
L-Trustful vs Suspecting	5.118 (2.197)	5.087 (1.905)	5.484 (2.143)	5.043 (2.099)	5.600 (2.363)	.935
M-Conventional vs Eccentric	5.314 (1.903)	5.217 (1.731)	4.677 (2.315)	4.913 (2.151)	5.160 (1.434)	2.050*
N-Simple vs Sophisticated	5.176 (2.095)	3.739 (2.301)	5.483 (1.913)	5.348 (1.799)	5.080 (1.412)	1.566

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 5B (Continued)

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-SCALE
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUMS
(EMPLOYED RELATED GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
O-Confident vs Insecure	4.157 (1.994)	3.977 (1.791)	4.391 (2.237)	4.277 (1.675)	4.439 (2.079)	4.550 (2.012)	4.353 (1.938)
Q1-Conserv vs Experiment	6.059 (2.395)	4.874 (2.240)	3.609 (1.687)	4.638 (2.185)	4.488 (2.369)	4.700 (2.105)	4.235 (2.213)
Q2-Dependent vs Self-Suf	8.059 (1.434)	7.632 (1.657)	7.797 (2.009)	7.423 (1.509)	7.500 (1.730)	8.200 (1.735)	7.132 (1.923)
Q3-Uncontrol vs Self-Control	6.667 (2.503)	7.345 (2.068)	7.141 (2.152)	7.185 (2.170)	6.415 (2.288)	7.300 (1.129)	7.191 (2.017)
Q4-Stable vs Tense	5.255 (2.407)	5.103 (2.102)	5.500 (2.370)	5.200 (1.857)	5.817 (2.616)	5.550 (2.645)	5.632 (2.108)

NOTE: Standard Deviations in Parentheses

TABLE 5B (Continued)

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-SCALE
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUMS
(EMPLOYED RELATED GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
O-Confident vs Insecure	4.000 (2.010)	3.652 (1.921)	4.323 (1.641)	4.913 (1.505)	4.200 (1.683)	.897
Q1-Conserv vs Experiment	4.431 (1.911)	4.522 (2.233)	4.968 (1.853)	5.261 (2.179)	4.640 (2.325)	3.947**
Q2-Dependent vs Self-Suf	7.333 (1.925)	7.391 (2.039)	7.968 (1.560)	7.348 (2.328)	7.120 (1.900)	1.592
Q3-Uncontrol vs Self-Control	7.039 (2.349)	6.913 (2.295)	7.645 (2.288)	7.478 (2.064)	6.400 (2.550)	1.506
Q4-Stable vs Tense	4.941 (2.034)	5.565 (2.273)	5.097 (1.758)	5.826 (2.622)	5.160 (2.285)	.964

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 6B

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-Scale ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE FEMALE CURRICULUMS (EMPLOYED RELATED GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
A-Aloof vs Outgoing	8.183 (2.089)	7.631 (1.935)	7.708 (1.967)	7.694 (2.162)	7.157 (1.965)	7.444 (1.830)	9.987**
B-Dull vs Bright	4.204 (1.395)	3.660 (1.354)	3.875 (1.191)	4.333 (1.242)	3.967 (1.340)	4.131 (1.341)	3.507**
C-Emotional vs Mature	7.392 (2.238)	6.845 (2.209)	6.667 (2.353)	7.361 (1.775)	6.640 (2.329)	7.017 (3.251)	2.928*
E-Submissive vs Dominant	3.497 (2.126)	3.699 (2.033)	4.208 (2.064)	4.167 (2.741)	3.329 (2.072)	3.469 (2.969)	1.384
F-Glum vs Enthusiastic	7.548 (2.331)	7.311 (2.393)	6.625 (2.516)	7.389 (2.101)	6.903 (2.363)	7.175 (4.086)	1.668
G-Casual vs Conscientious	7.332 (1.847)	7.252 (1.856)	6.735 (1.715)	6.639 (2.153)	7.517 (1.961)	7.765 (3.143)	3.591**
H-Timid vs Adventurous	6.150 (2.245)	5.350 (1.984)	5.292 (2.136)	5.861 (2.474)	5.353 (2.028)	5.317 (2.900)	5.627**
I-Tough vs Sensitive	7.006 (2.148)	7.126 (2.172)	7.292 (1.989)	7.500 (2.467)	7.278 (2.112)	7.554 (2.013)	2.932*
L-Trustful vs Suspecting	4.829 (2.002)	5.408 (1.927)	5.125 (1.872)	5.861 (1.973)	5.363 (1.781)	5.396 (1.915)	4.944**
M-Conventional vs Eccentric	5.584 (1.760)	5.786 (1.908)	6.167 (1.949)	6.083 (1.842)	5.761 (1.894)	5.892 (1.776)	1.565
N-Simple vs Sophisticated	4.425 (1.669)	4.757 (1.768)	5.333 (2.220)	5.083 (1.730)	4.671 (1.820)	4.713 (1.831)	2.379*

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 6B (Continued)

16 PF SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-SCALE ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE FEMALE CURRICULUMS
(EMPLOYED RELATED GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
O-Confident vs Insecure	4.587 (1.961)	4.495 (1.960)	4.417 (1.840)	4.444 (2.090)	5.048 (2.094)	4.856 (2.018)	2.681*
Q1-Conserv vs Experiment	4.617 (2.176)	4.204 (2.055)	4.417 (1.640)	5.722 (2.690)	4.036 (1.991)	3.902 (1.998)	9.116**
Q2-Dependent vs Self-Suf	6.820 (1.640)	6.641 (1.577)	6.292 (1.681)	6.972 (1.682)	6.399 (1.531)	6.394 (1.604)	4.108**
Q3-Uncontrol vs Self-Control	7.204 (2.294)	6.291 (2.550)	4.875 (2.213)	7.000 (2.673)	5.903 (2.488)	5.992 (2.250)	15.691**
Q4-Stable vs Tense	5.746 (2.158)	6.709 (2.163)	6.583 (1.816)	6.194 (2.162)	6.595 (2.267)	6.548 (2.166)	7.383

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 7B

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUM (EMPLOYED RELATED GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
1. Ability Utilization	18.686 (2.379)	19.586 (2.705)	19.609 (2.604)	19.546 (2.845)	19.622 (2.609)	19.850 (3.281)	18.779 (2.957)
2. Achievement	18.137 (2.506)	18.759 (3.107)	18.813 (2.701)	18.523 (2.881)	19.024 (2.722)	20.050 (2.800)	17.956 (3.020)
3. Activity	15.804 (2.050)	16.644 (3.264)	16.906 (3.196)	16.138 (3.258)	16.183 (2.820)	16.850 (4.056)	16.074 (3.289)
4. Advancement	19.804 (2.898)	20.667 (2.991)	19.984 (3.185)	19.346 (2.917)	20.622 (2.831)	20.500 (3.086)	19.471 (3.361)
5. Authority	11.725 (3.317)	12.207 (3.538)	12.359 (3.119)	12.346 (3.345)	11.768 (3.076)	10.700 (3.310)	12.029 (3.632)
6. Company Prac and Pol	19.000 (2.891)	19.207 (3.148)	18.781 (3.031)	18.677 (3.283)	19.037 (3.168)	19.450 (3.576)	18.162 (2.960)
7. Compensation I	17.314 (3.320)	17.517 (3.187)	18.406 (2.635)	17.431 (2.988)	17.744 (2.836)	17.150 (2.961)	16.838 (2.853)
8. Co-workers	18.294 (3.042)	18.287 (3.537)	19.094 (3.141)	18.215 (3.435)	18.195 (3.041)	18.250 (3.041)	17.559 (3.197)
9. Creativity	14.725 (2.779)	15.218 (2.994)	14.969 (2.783)	15.454 (3.153)	15.439 (3.170)	14.650 (2.519)	14.382 (3.319)
10. Independence	10.039 (3.709)	10.966 (3.680)	11.438 (4.082)	11.529 (3.877)	10.500 (3.570)	9.050 (3.332)	10.471 (3.298)

NOTE: Standard Deviations in Parentheses

TABLE 7B (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUMS
(EMPLOYED RELATED GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
1. Ability Utilization	19.902 (2.948)	19.826 (3.243)	18.903 (2.675)	19.826 (2.329)	19.480 (2.104)	1.169
2. Achievement	19.529 (3.075)	18.696 (2.787)	19.032 (3.060)	19.652 (2.622)	19.040 (2.508)	1.811*
3. Activity	17.412 (3.436)	15.870 (4.930)	16.839 (2.478)	17.391 (2.330)	16.240 (2.650)	1.369
4. Advancement	20.373 (3.577)	19.391 (3.201)	19.968 (3.554)	20.174 (3.626)	20.600 (2.986)	1.654
5. Authority	12.029 (3.318)	12.000 (4.011)	12.452 (3.828)	12.304 (3.390)	11.960 (3.297)	.836
6. Company Prac. and Pol.	19.412 (2.837)	18.739 (2.911)	18.935 (2.804)	18.783 (3.872)	20.000 (3.000)	.981
7. Compensation I	18.627 (3.364)	18.087 (3.329)	16.226 (3.694)	17.826 (2.640)	18.000 (3.123)	2.132*
8. Co-workers	18.118 (3.548)	19.087 (3.204)	18.419 (3.149)	18.609 (4.120)	18.560 (3.990)	.810
9. Creativity	15.333 (3.141)	14.391 (3.665)	15.548 (3.275)	16.130 (4.104)	13.400 (2.708)	1.787
10. Independence	11.980 (3.658)	11.652 (4.407)	9.871 (3.845)	11.913 (5.071)	9.600 (3.512)	2.434**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 7B (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS (EMPLOYED RELATED GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
11. Moral Value	19.098 (4.192)	18.391 (4.033)	19.047 (3.777)	17.823 (3.593)	19.037 (3.550)	19.600 (3.347)	17.588 (4.240)
12. Recognition	15.765 (3.063)	16.287 (3.732)	15.813 (3.572)	16.262 (3.333)	16.329 (3.414)	14.650 (3.588)	16.074 (3.365)
13. Responsibility	13.922 (2.792)	15.253 (3.074)	15.047 (3.292)	15.108 (2.714)	15.000 (2.948)	13.950 (2.373)	14.559 (3.140)
14. Security	20.667 (3.147)	21.448 (2.710)	20.563 (2.889)	20.700 (3.213)	21.354 (2.843)	21.700 (3.011)	20.176 (3.167)
15. Social Service	14.941 (2.641)	16.310 (3.279)	17.047 (2.881)	16.908 (3.485)	16.341 (3.179)	15.050 (4.685)	15.529 (3.098)
16. Social Status	12.000 (2.939)	13.529 (3.854)	13.859 (3.152)	13.715 (3.723)	13.744 (3.502)	11.850 (3.499)	12.897 (3.158)
17. Supervision (Human Relations)	18.706 (2.873)	19.253 (3.096)	19.406 (3.115)	18.723 (3.221)	18.890 (3.162)	19.200 (3.037)	18.588 (2.938)
18. Supervision (Technical)	17.647 (2.440)	18.103 (3.039)	18.297) (2.671)	17.754 (3.175)	17.756 (2.938)	17.900 (2.024)	18.059 (2.791)
19. Variety	14.706 (3.107)	15.506 (3.382)	15.328 (2.732)	14.638 (3.085)	14.927 (3.102)	13.600 (3.858)	15.015 (3.445)
20. Working Conditions	18.353 (3.463)	18.851 (3.233)	19.547 (2.970)	19.446 (3.004)	19.354 (3.008)	20.550 (2.645)	19.368 (3.051)

NOTE: Standard Deviations in Parentheses

TABLE 7B (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUM (EMPLOYED RELATED GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
11. Moral Value	18.902 (3.596)	18.913 (5.477)	18.290 (3.875)	19.739 (2.632)	17.960 (4.118)	1.574
12. Recognition	17.059 (3.602)	15.696 (2.851)	15.419 (4.201)	17.217 (2.876)	17.040 (3.565)	1.327
13. Responsibility	14.863 (3.013)	14.739 (4.614)	14.774 (3.263)	15.913 (3.592)	13.640 (2.644)	1.520
14. Security	21.118 (3.272)	20.826 (3.312)	20.323 (3.187)	20.435 (3.203)	22.360 (2.396)	1.752
15. Social Service	16.118 (2.740)	16.174 (4.877)	15.677 (3.458)	16.435 (2.967)	16.200 (3.873)	2.164*
16. Social Status	13.804 (3.611)	12.565 (3.131)	12.355 (4.013)	13.696 (3.363)	13.240 (3.045)	1.931*
17. Supervision (Human Relations)	19.549 (2.831)	18.913 (3.329)	19.161 (2.583)	18.826 (4.174)	18.960 (3.259)	.570
18. Supervision (Technical)	18.431 (2.516)	18.130 (3.266)	18.355 (3.517)	17.652 (3.498)	18.120 (2.891)	.454
19. Variety	14.725 (3.623)	15.217 (4.502)	15.484 (3.501)	17.087 (3.872)	15.240 (3.620)	1.660
20. Working Conditions	20.275 (3.281)	19.391 (2.919)	18.452 (2.779)	18.826 (3.614)	20.040 (2.638)	1.827*

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 7B (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUM
(EMPLOYED RELATED GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
21. Work Challenge	13.667 (3.907)	15.103 (3.414)	15.969 (3.446)	15.254 (3.719)	15.134 (3.996)	14.050 (4.058)	15.368 (3.494)
22. Company Image	18.078 (3.328)	18.793 (3.228)	18.625 (3.283)	18.500 (3.204)	18.878 (3.160)	19.500 (3.035)	18.029 (2.972)
23. Organizational Control	13.765 (2.833)	13.920 (3.137)	14.250 (3.237)	14.438 (3.199)	13.695 (3.321)	13.650 (2.581)	13.765 (3.186)
24. Feedback	16.275 (3.188)	16.460 (3.510)	16.125 (3.331)	15.900 (2.914)	16.537 (2.953)	16.050 (3.591)	15.676 (3.010)
25. Physical Facilities	16.392 (3.578)	17.172 (3.421)	17.016 (3.047)	17.800 (3.843)	17.524 (3.913)	17.200 (4.348)	16.809 (3.617)
26. Work Relevance	15.353 (3.560)	16.391 (3.346)	16.125 (2.809)	15.915 (3.249)	16.451 (3.044)	15.800 (3.764)	15.765 (2.928)
27. Company Prestige	17.529 (2.976)	17.954 (3.440)	17.438 (2.975)	17.454 (3.126)	18.207 (2.939)	16.950 (3.818)	17.235 (2.998)
28. Company Goals	16.137 (3.424)	16.448 (3.316)	16.641 (3.340)	16.062 (3.589)	16.171 (3.288)	16.600 (5.041)	15.868 (3.532)
29. Closure	16.314 (3.010)	17.310 (3.394)	17.734 (3.772)	17.508 (3.163)	16.976 (3.682)	17.450 (3.517)	16.338 (3.203)
30. Compensation II	17.255 (2.999)	16.897 (3.379)	18.203 (3.102)	17.377 (3.498)	17.293 (3.253)	16.650 (3.265)	16.779 (3.433)

NOTE: Standard Deviations in Parentheses

TABLE 7B (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUM
(EMPLOYED RELATED GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
21. Work Challenge	15.706 (4.478)	15.087 (3.423)	13.710 (3.960)	14.609 (3.986)	15.240 (3.113)	1.730
22. Company Image	18.863 (3.424)	18.696 (2.636)	17.871 (3.403)	19.174 (2.871)	19.080 (2.722)	.873
23. Organizational Control	14.314 (3.755)	13.870 (4.093)	13.613 (3.801)	15.565 (4.088)	12.080 (2.597)	1.718
24. Feedback	16.549 (3.061)	14.957 (2.738)	16.323 (3.113)	17.043 (2.868)	16.560 (3.392)	1.005
25. Physical Facilities	17.588 (4.031)	18.522 (2.906)	17.613 (3.955)	16.174 (4.619)	16.200 (3.524)	1.332
26. Work Relevance	16.824 (3.211)	15.435 (3.231)	15.613 (2.996)	16.304 (2.867)	15.440 (3.042)	1.025
27. Company Prestige	18.196 (3.493)	16.522 (4.055)	17.774 (3.383)	17.870 (4.267)	17.400 (2.677)	.963
28. Company Goals	17.137 (3.213)	15.609 (2.856)	16.161 (3.494)	16.696 (2.670)	16.840 (3.567)	.707
29. Closure	18.588 (2.830)	16.696 (4.016)	17.000 (4.091)	17.826 (2.516)	17.480 (3.630)	1.916*
30. Compensation II	18.510 (3.523)	18.174 (3.589)	16.290 (4.133)	16.826 (3.550)	17.800 (2.814)	1.810*

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 8B

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE FEMALE CURRICULUMS
(EMPLOYED RELATED GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
1. Ability Utilization	20.746 (2.903)	20.806 (2.769)	20.167 (2.316)	21.333 (2.651)	20.290 (2.943)	20.319 (2.941)	2.078
2. Achievement	20.910 (2.539)	20.272 (2.705)	18.792 (3.078)	20.889 (2.470)	19.713 (2.719)	19.879 (2.815)	9.717**
3. Activity	17.410 (3.317)	17.660 (3.394)	15.708 (2.612)	17.333 (2.976)	16.550 (3.122)	16.475 (3.295)	5.866**
4. Advancement	16.243 (4.036)	19.243 (3.047)	17.083 (4.042)	17.278 (4.040)	19.242 (3.284)	19.913 (3.512)	46.219**
5. Authority	9.979 (2.966)	11.330 (3.719)	9.208 (2.889)	9.861 (3.587)	10.677 (3.086)	10.648 (3.379)	4.542**
6. Company Prac. and Pol.	19.383 (3.418)	19.466 (3.003)	19.375 (3.398)	19.417 (2.842)	19.813 (3.388)	20.281 (3.098)	3.586**
7. Compensation I	14.713 (3.629)	16.786 (3.511)	15.625 (3.681)	15.917 (3.533)	16.486 (3.441)	16.802 (3.209)	16.787**
8. Co-workers	18.677 (3.260)	19.369 (3.337)	18.750 (3.287)	17.611 (4.009)	19.511 (3.404)	19.679 (3.456)	5.603**
9. Creativity	12.560 (3.155)	15.854 (3.557)	13.000 (2.874)	13.222 (3.727)	13.867 (2.896)	14.135 (3.148)	20.928**
10. Independence	9.174 (3.524)	11.990 (4.475)	10.208 (4.086)	9.611 (3.119)	11.039 (3.518)	10.327 (3.423)	14.368**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 8B (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE FEMALE CURRICULUMS
(EMPLOYED RELATED GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
11. Moral Value	20.847 (3.466)	20.204 (3.219)	18.167 (4.603)	20.972 (3.203)	19.846 (3.988)	20.571 (3.793)	4.588**
12. Recognition	13.647 (3.625)	16.427 (3.722)	15.000 (3.323)	14.361 (3.980)	15.912 (3.448)	15.625 (3.506)	19.707**
13. Responsibility	13.353 (2.749)	15.107 (3.293)	13.667 (2.988)	13.556 (2.843)	14.006 (2.929)	14.063 (2.891)	6.441**
14. Security	19.961 (3.251)	20.417 (2.785)	19.875 (3.012)	20.722 (3.292)	20.610 (3.110)	20.617 (3.097)	2.284*
15. Social Service	22.380 (2.761)	19.641 (3.553)	18.958 (3.085)	20.556 (4.095)	18.713 (3.499)	18.448 (3.786)	58.891**
16. Social Status	11.015 (3.797)	12.990 (3.719)	10.667 (3.919)	11.111 (3.616)	12.722 (3.544)	12.594 (3.756)	11.572**
17. Supervision (Human Relations)	17.961 (3.280)	18.456 (3.025)	18.542 (3.349)	18.444 (3.047)	18.625 (3.346)	18.992 (3.189)	4.042**
18. Supervision (Technical)	18.054 (2.929)	17.757 (2.799)	18.042 (2.851)	17.806 (2.745)	17.949 (2.951)	17.783 (2.839)	.435
19. Variety	14.614 (3.541)	15.175 (3.491)	13.375 (3.621)	14.917 (3.767)	14.861 (3.438)	15.181 (3.700)	2.017
20. Working Conditions	18.257 (3.497)	19.524 (3.289)	18.250 (3.011)	19.778 (3.481)	19.480 (3.225)	19.385 (3.296)	6.775**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 8B (Continued)

MIQ SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE FEMALE CURRICULUMS (EMPLOYED RELATED GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
21. Work Challenge	12.497 (3.686)	14.262 (3.523)	13.417 (3.955)	12.361 (3.781)	14.130 (3.867)	13.515 (3.876)	7.886**
22. Company Image	19.039 (3.305)	19.534 (2.821)	19.167 (3.510)	19.083 (2.454)	19.444 (3.347)	19.502 (3.217)	1.019
23. Organizational Control	11.728 (2.918)	13.864 (3.314)	12.458 (2.604)	12.833 (3.010)	13.100 (2.768)	13.131 (2.864)	14.018**
24. Feedback	15.796 (3.045)	16.602 (2.518)	15.625 (2.584)	15.056 (2.574)	16.290 (2.970)	16.131 (2.971)	2.625*
25. Physical Facilities	14.589 (4.190)	16.777 (4.106)	14.667 (3.409)	16.639 (4.244)	15.967 (4.096)	15.338 (3.959)	5.329**
26. Work Relevance	16.012 (3.494)	16.515 (3.313)	16.167 (2.461)	15.722 (3.403)	16.263 (3.370)	16.310 (3.519)	.624
27. Company Prestige	19.168 (3.577)	18.398 (3.490)	17.250 (3.578)	19.778 (3.181)	17.429 (3.353)	18.000 (3.651)	10.315**
28. Company Goals	17.216 (3.304)	17.738 (3.196)	16.833 (3.171)	16.917 (3.202)	17.740 (3.691)	17.921 (3.562)	2.248*
29. Closure	16.826 (3.689)	18.233 (3.347)	17.083 (3.513)	16.917 (2.912)	17.568 (3.123)	17.417 (3.466)	3.389**
30. Compensation II	14.763 (3.778)	16.058 (3.638)	15.333 (3.852)	15.806 (3.702)	15.994 (3.735)	16.042 (3.649)	5.732**

NOTE: Standard Deviations in Parentheses
*Significant at .05
**Significant at .01

TABLE 9B

VDI, MSAT SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE MALE CURRICULUMS (EMPLOYED RELATED GROUPS)

APTITUDE	Electronics	Power and Home Electricity	Carpentry	Automotives	Mechanical Drafting and Design	Diesel Mechanics	Machine Shop
VDI Scale	37.279 (4.425)	37.196 (4.976)	37.478 (3.691)	39.935 (4.351)	38.217 (4.123)	37.480 (3.743)	38.980 (3.992)
MSAT Scale	32.125 12.354	27.041 10.771	24.373 8.196	24.426 8.540	30.389 8.903	26.188 9.683	23.610 7.381

NOTE: Standard Deviations in Parentheses

TABLE 9B (Continued)

VDI, MSAT SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES
ASSOCIATED WITH THE ANALYSES OF DIFFERENCES
AMONG THE MALE CURRICULUMS
(EMPLOYED RELATED GROUPS)

APTITUDE	Welding	Farm Equipment Mechanics	Aircraft Mechanics	Agricultural Technology	Optical Technology	F Test
VDI Scale	37.736 (4.113)	36.328 (4.857)	36.792 (4.229)	37.622 (3.540)	38.250 (3.492)	2.485**
MSAT Scale	20.275 6.144	22.727 8.670	33.933 11.266	28.091 8.668	31.714 12.443	7.218**

NOTE: Standard Deviations in Parentheses
**Significant at .01

TABLE 10B

VDI, MSAT SCALE
MEANS, STANDARD DEVIATIONS AND ANOVA F-VALUES ASSOCIATED WITH THE ANALYSES OF DIFFERENCES AMONG THE FEMALE CURRICULUMS
(EMPLOYED RELATED GROUPS)

APTITUDE	Practical Nursing	Cosmetology	Dental Assistant	Medical Laboratory Assistant	Clerical	Secretarial	F Test
VDI Scale	40.114 (3.088)	37.583 (3.849)	38.917 (3.775)	40.833 (3.028)	37.130 (4.195)	38.729 (3.435)	27.510**
MSAT Scale	33.104 10.424	25.647 9.224	30.059 7.933	43.208 11.847	25.595 9.035	32.013 10.127	30.312**

NOTE: Standard Deviations in Parentheses
**Significant at .01

APPENDIX C

F-VALUES FOR ANOVA BETWEEN THE GRADUATE GROUP AND THE EMPLOYED RELATED GROUP FOR EACH OF THE EIGHTEEN CURRICULA

	Table	Page
Male Curriculums		
Agri-Technology	1C	155
Aircraft Mechanics	2C	156
Automotive	3C	157
Carpentry	4C	158
Diesel Mechanics	5C	159
Electronics	6C	160
Farm Equipment Mechanics	7C	161
Machine Shop	8C	162
Mechanical Drafting and Design	9C	163
Optical Technology	10C	164
Power and Home Electricity	11C	165
Welding	12C	166
Female Curriculums		
Clerical Training	13C	167
Cosmetology	14C	168
Dental Assistant	15C	169
Medical Laboratory Assistant	16C	170
Practical Nursing	17C	171
Secretarial Training	18C	172

TABLE 1C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE AGRI-TECHNOLOGY CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.355
V-Verbal Aptitude	.711
N-Numerical Aptitude	3.119*
S-Spatial Aptitude	.132
P-Form Perception	3.896*
Q-Clerical Perception	4.917*
K-Motor Coordination	2.317
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	2.425
H-2 Health Service	.002
H-3 Office Work	.073
H-4 Electronics	.001
H-5 Food Service	1.148
H-6 Carpentry	2.551
H-7 Sales-Office	.084
H-8 Clean Hands	.290
H-9 Outdoors	2.164
16 PF	
A-Reserved	.015
B-Less Intelligent	.299
C-Emotional	.365
E-Humble	.082
F-Sober	.471
G-Expedient	.143
H-Shy	.529
I-Tough Minded	1.575
L-Trusting	.690
M-Practical	.262
N-Forthright	.986
O-Placid	.208
Q1-Conservative	3.113*
Q2-Group-Tied	1.725
Q3-Casual	4.187*
Q4-Relaxed	.023

TEST	F-value
MIQ	
Ability Utilization	.379
Achievement	2.527
Activity	.004
Advancement	.001
Authority	1.673
Comp. Prac. & Policy	.015
Compensation I	.299
Co-Workers	.061
Creativity	.000
Independence	.863
Moral Value	.013
Recognition	.078
Responsibility	1.128
Security	.320
Social Service	1.910
Social Status	1.109
Supervision (Hum. Rel.)	.782
Supervision (Technical)	1.372
Variety	.766
Working Conditions	1.119
Work Challenge	.350
Company Image	.069
Organization Control	.500
Feed Back	.257
Physical Facilities	.000
Work Relevance	1.254
Company Prestige	.975
Company Goals	.278
Closure	6.178*
Compensation II	1.297
VDI SCORE	.402
MSAT SCORE	1.019

* Significant at $\alpha = .10$

TABLE 2C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE AIRCRAFT MECHANICS CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.206
V-Verbal Aptitude	1.730
N-Numerical Aptitude	.351
S-Spatial Aptitude	.018
P-Form Perception	.181
Q-Clerical Perception	.115
K-Motor Coordination	1.412
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	1.404
H-2 Health Service	.141
H-3 Office Work	.028
H-4 Electronics	.855
H-5 Food Service	.729
H-6 Carpentry	1.206
H-7 Sales-Office	2.261
H-8 Clean Hands	.203
H-9 Outdoors	.866
16 PF	
A-Reserved	.084
B-Less Intelligent	3.833*
C-Emotional	.003
E-Humble	1.201
F-Sober	.038
G-Expedient	.241
H-Shy	.012
I-Tough Minded	.449
L-Trusting	2.432
M-Practical	.084
N-Forthright	1.323
O-Placid	.002
Q1-Conservative	.017
Q2-Group-Tied	.088
Q3-Casual	.058
Q4-Relaxed	.081

TEST	F-value
MIQ	
Ability Utilization	.509
Achievement	.156
Activity	.143
Advancement	.133
Authority	.036
Comp. Prac. & Policy	.028
Compensation I	.805
Co-Workers	3.559*
Creativity	.141
Independence	1.131
Moral Value	.590
Recognition	.011
Responsibility	.707
Security	.017
Social Service	.022
Social Status	.070
Supervision (Hum. Rel.)	.207
Supervision (Technical)	1.322
Variety	.084
Working Conditions	.859
Work Challenge	.007
Company Image	.358
Organization Control	.032
Feed Back	.237
Physical Facilities	.001
Work Relevance	.228
Company Prestige	.181
Company Goals	.134
Closure	.167
Compensation II	.326
VDI SCORE	.090
MSAT SCORE	.458

*Significant at α = .10

TABLE 3C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE AUTOMOTIVE CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.140
V-Verbal Aptitude	.986
N-Numerical Aptitude	1.321
S-Spatial Aptitude	.882
P-Form Perception	.031
Q-Clerical Perception	.694
K-Motor Coordination	1.429
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	2.061
H-2 Health Service	.330
H-3 Office Work	.081
H-4 Electronics	.067
H-5 Food Service	.894
H-6 Carpentry	.000
H-7 Sales-Office	1.983
H-8 Clean Hands	.355
H-9 Outdoors	.433
16 PF	
A-Reserved	.077
B-Less Intelligent	.006
C-Emotional	.536
E-Humble	.013
F-Sober	3.988*
G-Expedient	.065
H-Shy	4.277*
I-Tough Minded	1.719
L-Trusting	.005
M-Practical	.325
N-Forthright	.791
O-Placid	2.236
Q1-Conservative	.782
Q2-Group-Tied	.037
Q3-Casual	2.317
Q4-Relaxed	.278

TEST	F-value
MIQ	
Ability Utilization	.122
Achievement	.517
Activity	.089
Advancement	.237
Authority	.825
Comp. Prac. & Policy	2.590
Compensation I	.516
Co-Workers	.865
Creativity	.089
Independence	.107
Moral Value	.426
Recognition	.305
Responsibility	2.171
Security	.021
Social Service	.008
Social Status	.020
Supervision (Hum. Rel.)	.187
Supervision (Technical)	.126
Variety	2.180
Working Conditions	.026
Work Challenge	1.110
Company Image	1.828
Organization Control	.140
Feed Back	.065
Physical Facilities	.225
Work Relevance	.631
Company Prestige	.590
Company Goals	.227
Closure	.908
Compensation II	.623
VDI SCORE	.540
MSAT SCORE	.202

* Significant at $\alpha = .10$

TABLE 4C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE CARPENTRY CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.055
V-Verbal Aptitude	.179
N-Numerical Aptitude	.001
S-Spatial Aptitude	.001
P-Form Perception	.544
Q-Clerical Perception	.084
K-Motor Coordination	.083
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.753
H-2 Health Service	.296
H-3 Office Work	.787
H-4 Electronics	.012
H-5 Food Service	1.465
H-6 Carpentry	.212
H-7 Sales-Office	.253
H-8 Clean Hands	.155
H-9 Outdoors	.081
16 PF	
A-Reserved	.219
B-Less Intelligent	.901
C-Emotional	.464
E-Humble	.112
F-Sober	.304
G-Expedient	.117
H-Shy	.010
I-Tough Minded	.032
L-Trusting	.447
M-Practical	.153
N-Forthright	.945
O-Placid	.477
Q1-Conservative	.000
Q2-Group-Tied	1.602
Q3-Casual	.804
Q4-Relaxed	.350

TEST	F-value
MIQ	
Ability Utilization	.272
Achievement	1.137
Activity	.218
Advancement	.690
Authority	.038
Comp. Prac. & Policy	.380
Compensation I	.030
Co-Workers	1.770
Creativity	.008
Independence	1.160
Moral Value	.002
Recognition	.070
Responsibility	.338
Security	1.092
Social Service	.906
Social Status	.392
Supervision (Hum. Rel.)	1.205
Supervision (Technical)	.447
Variety	.356
Working Conditions	.698
Work Challenge	.801
Company Image	.411
Organization Control	.197
Feed Back	.025
Physical Facilities	.077
Work Relevance	1.281
Company Prestige	.364
Company Goals	1.204
Closure	.530
Compensation II	.413
VDI SCORE	.861
MSAT SCORE	1.112

* Significant at $\alpha = .10$

TABLE 5C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE DIESEL MECHANICS CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.085
V-Verbal Aptitude	.056
N-Numerical Aptitude	.001
S-Spatial Aptitude	1.470
P-Form Perception	.373
Q-Clerical Perception	.082
K-Motor Coordination	.644
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.332
H-2 Health Service	.044
H-3 Office Work	.277
H-4 Electronics	1.148
H-5 Food Service	.185
H-6 Carpentry	.494
H-7 Sales-Office	.116
H-8 Clean Hands	.075
H-9 Outdoors	.011
16 PF	
A-Reserved	.003
B-Less Intelligent	.015
C-Emotional	.204
E-Humble	.407
F-Sober	.382
G-Expedient	.012
H-Shy	.233
I-Tough Minded	.289
L-Trusting	.428
M-Practical	.000
N-Forthright	1.002
O-Placid	.169
Q1-Conservative	.420
Q2-Group-Tied	.002
Q3-Casual	.060
Q4-Relaxed	3.399*
MIQ	
Ability Utilization	.397
Achievement	.175
Activity	.879
Advancement	.058
Authority	.024
Comp. Prac. & Policy	.224
Compensation I	2.280
Co-Workers	.542
Creativity	.145
Independence	.019
Moral Value	1.018
Recognition	.004
Responsibility	1.569
Security	1.036
Social Service	.066
Social Status	2.426
Supervision (Hum. Rel.)	.279
Supervision (Technical)	.045
Variety	.370
Working Conditions	.365
Work Challenge	2.011
Company Image	.013
Organization Control	.104
Feed Back	1.929
Physical Facilities	2.430
Work Relevance	.045
Company Prestige	.007
Company Goals	1.506
Closure	.019
Compensation II	.519
VDI SCORE	.555
MSAT SCORE	2.161

* Significant at $\alpha = .10$

TABLE 6C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE ELECTRONICS CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.118
V-Verbal Aptitude	.003
N-Numerical Aptitude	.008
S-Spatial Aptitude	.511
P-Form Perception	.812
Q-Clerical Perception	.282
K-Motor Coordination	1.420
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	1.094
H-2 Health Service	.101
H-3 Office Work	1.053
H-4 Electronics	1.133
H-5 Food Service	.064
H-6 Carpentry	1.318
H-7 Sales-Office	.626
H-8 Clean Hands	3.176*
H-9 Outdoors	.613
16 PF	
A-Reserved	.610
B-Less Intelligent	.160
C-Emotional	.001
E-Humble	.050
F-Sober	1.868
G-Expedient	.575
H-Shy	1.319
I-Tough Minded	.092
L-Trusting	1.812
M-Practical	1.252
N-Forthright	.095
O-Placid	1.315
Q1-Conservative	.230
Q2-Group-Tied	2.731
Q3-Casual	.659
Q4-Relaxed	.246

TEST	F-value
MIQ	
Ability Utilization	.041
Achievement	.035
Activity	.923
Advancement	.399
Authority	.247
Comp. Prac. & Policy	1.783
Compensation I	.078
Co-Workers	3.268*
Creativity	.175
Independence	.001
Moral Value	.079
Recognition	.044
Responsibility	.702
Security	.005
Social Service	1.822
Social Status	.584
Supervision (Hum. Rel.)	.574
Supervision (Technical)	.123
Variety	.147
Working Conditions	.276
Work Challenge	.003
Company Image	.284
Organization Control	1.023
Feed Back	1.468
Physical Facilities	.158
Work Relevance	.728
Company Prestige	.725
Company Goals	2.375
Closure	.400
Compensation II	.001
VDI SCORE	.025
MSAT SCORE	.486

* Significant at $\alpha = .10$

TABLE 9C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE MECHANICAL DRAFTING AND DESIGN CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.340
V-Verbal Aptitude	.080
N-Numerical Aptitude	.667
S-Spatial Aptitude	.250
P-Form Perception	.003
Q-Clerical Perception	.172
K-Motor Coordination	.721
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.557
H-2 Health Service	.127
H-3 Office Work	.128
H-4 Electronics	.018
H-5 Food Service	.132
H-6 Carpentry	.029
H-7 Sales-Office	.871
H-8 Clean Hands	.124
H-9 Outdoors	.012
16 PF	
A-Reserved	.318
B-Less Intelligent	1.270
C-Emotional	.431
E-Humble	.199
F-Sober	.697
G-Expedient	.178
H-Shy	.126
I-Tough Minded	1.586
L-Trusting	.843
M-Practical	.674
N-Forthright	.067
O-Placid	.874
Q1-Conservative	.935
Q2-Group-Tied	.697
Q3-Casual	.001
Q4-Relaxed	.101

TEST	F-value
MIQ	
Ability Utilization	1.088
Achievement	.023
Activity	.369
Advancement	.705
Authority	.134
Comp. Prac. & Policy	.398
Compensation I	2.479
Co-Workers	.013
Creativity	.166
Independence	.209
Moral Value	.276
Recognition	.785
Responsibility	1.386
Security	.137
Social Service	.154
Social Status	.285
Supervision (Hum. Rel.)	.044
Supervision (Technical)	.104
Variety	2.184
Working Conditions	.010
Work Challenge	.007
Company Image	.000
Organization Control	.295
Feed Back	.230
Physical Facilities	.076
Work Relevance	.004
Company Prestige	.004
Company Goals	.030
Closure	.132
Compensation II	.311
VDI SCORE	.963
MSAT SCORE	.003

TABLE 10C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE OPTICAL TECHNOLOGY CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	1.107
V-Verbal Aptitude	.354
N-Numerical Aptitude	.970
S-Spatial Aptitude	.151
P-Form Perception	.052
Q-Clerical Perception	.014
K-Motor Coordination	.000
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.001
H-2 Health Service	.800
H-3 Office Work	.025
H-4 Electronics	.051
H-5 Food Service	.005
H-6 Carpentry	.002
H-7 Sales-Office	.009
H-8 Clean Hands	.003
H-9 Outdoors	.015
16 PF	
A-Reserved	.476
B-Less Intelligent	.056
C-Emotional	.278
E-Humble	.167
F-Sober	.008
G-Expedient	.250
H-Shy	.111
I-Tough Minded	.000
L-Trusting	.095
M-Practical	.081
N-Forthright	.078
O-Placid	.021
Q1-Conservative	.004
Q2-Group-Tied	.071
Q3-Casual	.212
Q4-Relaxed	.369

TEST	F-value
MIQ	
Ability Utilization	.000
Achievement	.188
Activity	.109
Advancement	.001
Authority	.001
Comp. Prac. & Policy	.001
Compensation I	.126
Co-Workers	1.178
Creativity	.435
Independence	.002
Moral Value	.019
Recognition	.000
Responsibility	.008
Security	.582
Social Service	.120
Social Status	.018
Supervision (Hum. Rel.)	.000
Supervision (Technical)	.064
Variety	.111
Working Conditions	.089
Work Challenge	.000
Company Image	.192
Organization Control	.005
Feed Back	.099
Physical Facilities	.011
Work Relevance	.181
Company Prestige	1.009
Company Goals	.351
Closure	.163
Compensation II	1.361
VDI SCORE	.046
MSAT SCORE	.042

TABLE 7C

F-VALUES FOR ANOVA
BETWEEN GRADUATE GROUP AND
EMPLOYED RELATED GROUP FOR THE
FARM EQUIPMENT MECHANICS CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.804
V-Verbal Aptitude	1.930
N-Numerical Aptitude	2.358
S-Spatial Aptitude	.325
P-Form Perception	2.008
Q-Clerical Perception	.662
K-Motor Coordination	.444
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.344
H-2 Health Service	.000
H-3 Office Work	.586
H-4 Electronics	.015
H-5 Food Service	.000
H-6 Carpentry	.013
H-7 Sales-Office	.289
H-8 Clean Hands	1.046
H-9 Outdoors	.039
16 PF	
A-Reserved	.012
B-Less Intelligent	1.884
C-Emotional	.177
E-Humble	.040
F-Sober	.277
G-Expedient	.142
H-Shy	.150
I-Tough Minded	.015
L-Trusting	.340
M-Practical	.020
N-Forthright	.709
O-Placid	2.289
Q1-Conservative	.658
Q2-Group-Tied	.476
Q3-Casual	.007
Q4-Relaxed	.000

TEST	F-value
MIQ	
Ability Utilization	.013
Achievement	1.771
Activity	.029
Advancement	.267
Authority	.038
Comp. Prac. & Policy	.240
Compensation I	.357
Co-Workers	.006
Creativity	.274
Independence	1.098
Moral Value	1.165
Recognition	.100
Responsibility	.016
Security	.083
Social Service	.636
Social Status	.821
Supervision (Hum. Rel.)	.004
Supervision (Technical)	.017
Variety	.100
Working Conditions	.098
Work Challenge	.070
Company Image	.448
Organization Control	.550
Feed Back	.009
Physical Facilities	.026
Work Relevance	.115
Company Prestige	.053
Company Goals	.313
Closure	.188
Compensation II	.024
VDI SCORE	.092
MSAT SCORE	.184

TABLE 8C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE MACHINE SHOP CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	1.128
V-Verbal Aptitude	1.831
N-Numerical Aptitude	.446
S-Spatial Aptitude	.864
P-Form Perception	1.018
Q-Clerical Perception	.397
K-Motor Coordination	.081
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.022
H-2 Health Service	.047
H-3 Office Work	.661
H-4 Electronics	.029
H-5 Food Service	.032
H-6 Carpentry	.000
H-7 Sales-Office	.004
H-8 Clean Hands	.088
H-9 Outdoors	.006
16 PF	
A-Reserved	.001
B-Less Intelligent	.698
C-Emotional	.366
E-Humble	.498
F-Sober	.380
G-Expedient	.023
H-Shy	.316
I-Tough Minded	.965
L-Trusting	.031
M-Practical	.227
N-Forthright	.007
O-Placid	.611
Q1-Conservative	.040
Q2-Group-Tied	.003
Q3-Casual	.413
Q4-Relaxed	.215

TEST	F-value
MIQ	
Ability Utilization	1.428
Achievement	.955
Activity	.197
Advancement	.601
Authority	.260
Comp. Prac. & Policy	.231
Compensation I	1.677
Co-Workers	.449
Creativity	2.364
Independence	.754
Moral Value	.029
Recognition	1.064
Responsibility	.148
Security	.107
Social Service	.682
Social Status	.224
Supervision (Hum. Rel.)	.000
Supervision (Technical)	.007
Variety	.220
Working Conditions	.483
Work Challenge	1.339
Company Image	.512
Organization Control	.273
Feed Back	.004
Physical Facilities	1.306
Work Relevance	.006
Company Prestige	.009
Company Goals	.197
Closure	.413
Compensation II	.179
VDI SCORE	.000
MSAT SCORE	.028

TABLE 11C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE POWER AND HOME ELECTRICITY CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.012
V-Verbal Aptitude	.001
N-Numerical Aptitude	.001
S-Spatial Aptitude	.405
P-Form Perception	.074
Q-Clerical Perception	.765
K-Motor Coordination	.439
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.007
H-2 Health Service	.039
H-3 Office Work	.035
H-4 Electronics	.163
H-5 Food Service	.706
H-6 Carpentry	.304
H-7 Sales-Office	.027
H-8 Clean Hands	.004
H-9 Outdoors	.137
16 PF	
A-Reserved	1.129
B-Less Intelligent	.063
C-Emotional	1.062
E-Humble	.032
F-Sober	.215
G-Expedient	.294
H-Shy	.114
I-Tough Minded	.231
L-Trusting	.084
M-Practical	.011
N-Forthright	.000
O-Placid	.006
Q1-Conservative	.020
Q2-Group-Tied	.325
Q3-Casual	.151
Q4-Relaxed	.015

TEST	F-value
MIQ	
Ability Utilization	1.168
Achievement	.658
Activity	1.081
Advancement	.016
Authority	.616
Comp. Prac. & Policy	.014
Compensation I	.179
Co-Workers	.083
Creativity	.028
Independence	.000
Moral Value	.019
Recognition	.146
Responsibility	.017
Security	.170
Social Service	.003
Social Status	1.017
Supervision (Hum. Rel.)	.358
Supervision (Technical)	.119
Variety	.039
Working Conditions	.281
Work Challenge	.008
Company Image	.227
Organization Control	.001
Feed Back	.388
Physical Facilities	.040
Work Relevance	.252
Company Prestige	.520
Company Goals	.010
Closure	.971
Compensation II	.010
VDI SCORE	.716
MSAT SCORE	.494

TABLE 12C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE WELDING CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.074
V-Verbal Aptitude	1.315
N-Numerical Aptitude	.001
S-Spatial Aptitude	3.527*
P-Form Perception	.241
Q-Clerical Perception	.313
K-Motor Coordination	1.093
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.906
H-2 Health Service	.350
H-3 Office Work	.092
H-4 Electronics	.000
H-5 Food Service	.390
H-6 Carpentry	1.621
H-7 Sales-Office	1.456
H-8 Clean Hands	.285
H-9 Outdoors	.540
16 PF	
A-Reserved	.155
B-Less Intelligent	.034
C-Emotional	.069
E-Humble	.191
F-Sober	2.667
G-Expedient	.497
H-Shy	1.757
I-Tough Minded	.261
L-Trusting	.004
M-Practical	.113
N-Forthright	.586
O-Placid	.083
Q1-Conservative	.500
Q2-Group-Tied	.001
Q3-Casual	.002
Q4-Relaxed	1.006

TEST	F-value
MIQ	
Ability Utilization	.082
Achievement	1.728
Activity	.971
Advancement	3.050*
Authority	.052
Comp. Prac. & Policy	.053
Compensation I	.143
Co-Workers	.391
Creativity	1.142
Independence	.012
Moral Value	.041
Recognition	.820
Responsibility	.162
Security	3.786*
Social Service	1.664
Social Status	2.471
Supervision (Hum. Rel.)	.049
Supervision (Technical)	.353
Variety	.026
Working Conditions	.713
Work Challenge	1.616
Company Image	.016
Organization Control	.728
Feed Back	.229
Physical Facilities	.195
Work Relevance	.130
Company Prestige	.300
Company Goals	.023
Closure	1.271
Compensation II	.109
VDI SCORE	2.276
MSAT SCORE	.133

* Significant at $\alpha = .10$

TABLE 13C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE CLERICAL CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	2.543
V-Verbal Aptitude	3.339*
N-Numerical Aptitude	2.893*
S-Spatial Aptitude	.072
P-Form Perception	.052
Q-Clerical Perception	.520
K-Motor Coordination	.276
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	1.085
H-2 Health Service	.030
H-3 Office Work	.575
H-4 Electronics	.920
H-5 Food Service	.267
H-6 Carpentry	.588
H-7 Sales-Office	.009
H-8 Clean Hands	.015
H-9 Outdoors	.002
16 PF	
A-Reserved	1.116
B-Less Intelligent	.001
C-Emotional	2.045
E-Humble	.425
F-Sober	.882
G-Expedient	.009
H-Shy	.854
I-Tough Minded	.075
L-Trusting	.023
M-Practical	.000
N-Forthright	.005
O-Placid	.001
Q1-Conservative	.616
Q2-Group-Tied	.002
Q3-Casual	.047
Q4-Relaxed	.273

TEST	F-value
MIQ	
Ability Utilization	.318
Achievement	1.050
Activity	.007
Advancement	.001
Authority	.004
Comp. Prac. & Policy	.399
Compensation I	.355
Co-Workers	.004
Creativity	.092
Independence	.217
Moral Value	.000
Recognition	.833
Responsibility	.891
Security	.415
Social Service	.035
Social Status	.001
Supervision (Hum. Rel.)	.072
Supervision (Technical)	.048
Variety	.115
Working Conditions	.020
Work Challenge	.001
Company Image	.000
Organization Control	.038
Feed Back	.009
Physical Facilities	.139
Work Relevance	.813
Company Prestige	.048
Company Goals	.091
Closure	.965
Compensation II	.228
VDI SCORE	.765
MSAT SCORE	.864

* Significant at $\alpha = .10$

TABLE 14C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE COSMETOLOGY CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.100
V-Verbal Aptitude	.003
N-Numerical Aptitude	.016
S-Spatial Aptitude	.276
P-Form Perception	1.187
Q-Clerical Perception	.943
K-Motor Coordination	.007
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.022
H-2 Health Service	.224
H-3 Office Work	.639
H-4 Electronics	.311
H-5 Food Service	.188
H-6 Carpentry	.192
H-7 Sales-Office	1.470
H-8 Clean Hands	.009
H-9 Outdoors	.908
16 PF	
A-Reserved	.105
B-Less Intelligent	2.171
C-Emotional	.057
E-Humble	.991
F-Sober	.595
G-Expedient	.003
H-Shy	.696
I-Tough Minded	1.114
L-Trusting	.060
M-Practical	.570
N-Forthright	.023
O-Placid	.098
Q1-Conservative	.701
Q2-Group-Tied	.031
Q3-Casual	.017
Q4-Relaxed	.094

TEST	F-value
MIQ	
Ability Utilization	.078
Achievement	.000
Activity	.306
Advancement	.013
Authority	.379
Comp. Prac. & Policy	.609
Compensation I	.510
Co-Workers	.113
Creativity	.364
Independence	.039
Moral Value	.120
Recognition	.621
Responsibility	.001
Security	.270
Social Service	.025
Social Status	.344
Supervision (Hum. Rel.)	.315
Supervision (Technical)	.011
Variety	1.449
Working Conditions	.750
Work Challenge	.331
Company Image	.045
Organization Control	.170
Feed Back	.121
Physical Facilities	.825
Work Relevance	.001
Company Prestige	.396
Company Goals	.336
Closure	2.261
Compensation II	.094
VDI SCORE	1.337
MSAT SCORE	.131

TABLE 15C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE DENTAL ASSISTANT CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	1.065
V-Verbal Aptitude	1.053
N-Numerical Aptitude	1.309
S-Spatial Aptitude	.680
P-Form Perception	.617
Q-Clerical Perception	.402
K-Motor Coordination	.288
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.076
H-2 Health Service	.114
H-3 Office Work	.819
H-4 Electronics	.279
H-5 Food Service	.495
H-6 Carpentry	.067
H-7 Sales-Office	.053
H-8 Clean Hands	.000
H-9 Outdoors	.164
16 PF	
A-Reserved	.611
B-Less Intelligent	.191
C-Emotional	.001
E-Humble	.020
F-Sober	.039
G-Expedient	.230
H-Shy	1.521
I-Tough Minded	.167
L-Trusting	.001
M-Practical	.460
N-Forthright	.012
O-Placid	.036
Q1-Conservative	2.355
Q2-Group-Tied	1.100
Q3-Casual	.330
Q4-Relaxed	1.855

TEST	F-value
MIQ	
Ability Utilization	.077
Achievement	.164
Activity	1.915
Advancement	.191
Authority	.028
Comp. Prac. & Policy	.022
Compensation I	.102
Co-Workers	.074
Creativity	1.432
Independence	.797
Moral Value	.639
Recognition	.001
Responsibility	.031
Security	.019
Social Service	1.372
Social Status	.119
Supervision (Hum. Rel.)	.512
Supervision (Technical)	.004
Variety	.023
Working Conditions	.055
Work Challenge	.048
Company Image	.303
Organization Control	.022
Feed Back	.076
Physical Facilities	.059
Work Relevance	3.137*
Company Prestige	.560
Company Goals	.509
Closure	1.095
Compensation II	3.494*
VDI SCORE	1.435
MSAT SCORE	.065

* Significant at α = .10

TABLE 16C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE MEDICAL LABORATORY ASSISTANT CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	1.712
V-Verbal Aptitude	.786
N-Numerical Aptitude	1.591
S-Spatial Aptitude	.538
P-Form Perception	.210
Q-Clerical Perception	.058
K-Motor Coordination	.186
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.480
H-2 Health Service	1.146
H-3 Office Work	.057
H-4 Electronics	.115
H-5 Food Service	.085
H-6 Carpentry	.185
H-7 Sales-Office	.376
H-8 Clean Hands	.133
H-9 Outdoors	.616
16 PF	
A-Reserved	.323
B-Less Intelligent	.131
C-Emotional	.025
E-Humble	.054
F-Sober	.176
G-Expedient	.202
H-Shy	.005
I-Tough Minded	.000
L-Trusting	.036
M-Practical	.389
N-Forthright	.003
O-Placid	.505
Q1-Conservative	.032
Q2-Group-Tied	.021
Q3-Casual	.008
Q4-Relaxed	.000

TEST	F-value
MIQ	
Ability Utilization	.175
Achievement	.111
Activity	.001
Advancement	.308
Authority	.004
Comp. Prac. & Policy	.529
Compensation I	.059
Co-Workers	.085
Creativity	.066
Independence	.078
Moral Value	.031
Recognition	.517
Responsibility	.063
Security	.191
Social Service	.010
Social Status	.027
Supervision (Hum. Rel.)	.202
Supervision (Technical)	.000
Variety	.015
Working Conditions	.080
Work Challenge	.305
Company Image	.190
Organization Control	.067
Feed Back	.422
Physical Facilities	.244
Work Relevance	.010
Company Prestige	.204
Company Goals	.025
Closure	.001
Compensation II	.507
VDI SCORE	.140
MSAT SCORE	.012

TABLE 17C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE PRACTICAL NURSING CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.001
V-Verbal Aptitude	.148
N-Numerical Aptitude	.236
S-Spatial Aptitude	.148
P-Form Perception	.233
Q-Clerical Perception	.080
K-Motor Coordination	.200
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.102
H-2 Health Service	.242
H-3 Office Work	.038
H-4 Electronics	.209
H-5 Food Service	.251
H-6 Carpentry	.298
H-7 Sales-Office	.014
H-8 Clean Hands	.021
H-9 Outdoors	.205
16 PF	
A-Reserved	.096
B-Less Intelligent	.008
C-Emotional	.097
E-Humble	.020
F-Sober	.687
G-Expedient	.058
H-Shy	.240
I-Tough Minded	.479
L-Trusting	.123
M-Practical	.080
N-Forthright	.001
O-Placid	.016
Q1-Conservative	.016
Q2-Group-Tied	.044
Q3-Casual	.107
Q4-Relaxed	1.583

TEST	F-value
MIQ	
Ability Utilization	1.072
Achievement	.011
Activity	.006
Advancement	.050
Authority	.000
Comp. Prac. & Policy	.046
Compensation I	.001
Co-Workers	.218
Creativity	.059
Independence	.030
Moral Value	.300
Recognition	.173
Responsibility	.018
Security	.344
Social Service	1.083
Social Status	.549
Supervision (Hum. Rel.)	.120
Supervision (Technical)	.134
Variety	.046
Working Conditions	.366
Work Challenge	.122
Company Image	.055
Organization Control	.243
Feed Back	.715
Physical Facilities	.012
Work Relevance	.470
Company Prestige	.275
Company Goals	.003
Closure	.023
Compensation II	.084
VDI SCORE	.012
MSAT SCORE	.005

TABLE 18C

F-VALUES FOR ANOVA BETWEEN GRADUATE GROUP AND EMPLOYED RELATED GROUP FOR THE SECRETARIAL TRAINING CURRICULUM

TEST	F-value
GATB APTITUDE SCORES	
G-Intelligence	.427
V-Verbal Aptitude	.013
N-Numerical Aptitude	1.668
S-Spatial Aptitude	.040
P-Form Perception	.804
Q-Clerical Perception	1.090
K-Motor Coordination	.178
MVII HOMOGENEOUS KEYS	
H-1 Mechanical	.086
H-2 Health Service	1.690
H-3 Office Work	2.432
H-4 Electronics	.003
H-5 Food Service	.592
H-6 Carpentry	.062
H-7 Sales-Office	.398
H-8 Clean Hands	1.891
H-9 Outdoors	.112
16 PF	
A-Reserved	.089
B-Less Intelligent	.003
C-Emotional	.117
E-Humble	.003
F-Sober	.201
G-Expedient	.012
H-Shy	.290
I-Tough Minded	.083
L-Trusting	.161
M-Practical	.178
N-Forthright	.000
O-Placid	.048
Q1-Conservative	.068
Q2-Group-Tied	.313
Q3-Casual	.058
Q4-Relaxed	.410

TEST	F-value
MIQ	
Ability Utilization	.287
Achievement	.363
Activity	.000
Advancement	.034
Authority	.437
Comp. Prac. & Policy	1.132
Compensation I	.000
Co-Workers	.155
Creativity	.029
Independence	.011
Moral Value	.854
Recognition	.233
Responsibility	.130
Security	.028
Social Service	.657
Social Status	.579
Supervision (Hum. Rel.)	.008
Supervision (Technical)	.234
Variety	.128
Working Conditions	.105
Work Challenge	.001
Company Image	.457
Organization Control	.787
Feed Back	.386
Physical Facilities	.051
Work Relevance	.231
Company Prestige	.414
Company Goals	.384
Closure	.064
Compensation II	.000
VDI SCORE	.019
MSAT SCORE	3.281*

* Significant at $\alpha = .10$

APPENDIX D

SIGNIFICANT DISCRIMINANT FUNCTIONS

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TABLE 1D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON GATB FOR MALE OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	65.07	315.377	17	.0000
2	13.72	70.486	15	.0000
3	11.92	61.336	13	.0000
4	4.54	23.576	11	.0154

Wilks Lambda = .793   Trace = .2440
D. F. = 77, 12783
F = 6.539   P = .0000

TABLE 2D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON GATB FOR MALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	53.41	108.368	17	.0000
2	18.32	39.255	15	.0009
3	12.94	27.983	13	.0099

Wilks Lambda = .723   Trace = .3423
D. F. = 77, 3825
F = 2.760   P = .0000

TABLE 3D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON GATB FOR FEMALE OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	66.08	290.337	11	.0000
2	23.64	108.449	9	.0000
3	6.89	32.199	7	.0001
4	2.74	12.859	5	.0250

Wilks Lambda = .812   Trace = .2196
D. F. = 35, 8992
F = 13.059   P = .0000

TABLE 4D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON GATB FOR FEMALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	61.96	164.732	11	.0000
2	24.79	68.423	9	.0000
3	7.72	21.697	7	.0034
4	3.96	11.181	5	.0481

Wilks Lambda = .812　　　Trace = .2178
D. F. = 35, 5454
F = 7.893　P = .0000

TABLE 5D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON GATB FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	70.92	2018.854	26	.0000
2	16.24	540.409	24	.0000
3	7.28	249.337	22	.0000
4	2.15	75.019	20	.0000
5	1.99	69.628	18	.0000
6	1.13	39.643	16	.0013

Wilks Lambda = .545　　　Trace = .7104
D. F. = 140, 32796
F = 22.407　P = .0000

TABLE 6D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON GATB FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	70.86	942.634	26	.0000
2	15.06	236.704	24	.0000
3	7.82	126.046	22	.0000
4	2.73	44.831	20	.0017

Wilks Lambda = .529　　　Trace = .7495
D. F. = 140, 14626
F = 10.504　P = .0000

TABLE 7D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MVII FOR MALE OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	60.72	970.884	19	.0000
2	19.13	355.838	17	.0000
3	9.72	188.201	15	.0000
4	6.76	132.585	13	.0000
5	1.45	29.217	11	.0026
6	1.33	26.729	9	.0020

Wilks Lambda = .447 Trace = .9458
D. F. = 99, 15032
F = 18.351

TABLE 8D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MVII FOR MALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	58.72	321.486	19	.0000
2	21.49	136.938	17	.0000
3	10.47	70.363	15	.0000
4	4.62	30.020	13	.0030

Wilks Lambda = .398 Trace = 1.1014
D. F. = 99, 4489
F = 6.328 P = .0000

TABLE 9D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MVII FOR FEMALE OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	90.92	1872.857	13	.0000
2	6.56	205.745	11	.0000
3	1.81	58.821	9	.0000
4	.65	21.176	7	.0041

Wilks Lambda = .365 Trace = 1.5374
D. F. = 45, 9553
F = 53.718 P = .0000

TABLE 10D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MVII FOR FEMALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	93.87	1327.159	13	.0000
2	4.10	97.098	11	.0000
3	1.52	36.725	9	.0001

Wilks Lambda = .322 Trace = 1.8904
D. F. = 45, 5791
F = 37.098 P = .0000

TABLE 11D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MVII FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	73.77	8610.546	28	.0000
2	17.23	3665.781	26	.0000
3	6.03	1609.124	24	.0000
4	1.10	335.115	22	.0000
5	1.03	313.326	20	.0000
6	.47	146.604	18	.0000
7	.16	50.418	16	.0001
8	.13	42.226	14	.0003

Wilks Lambda = .050 Trace = 6.3715
D. F. = 180, 40714
F = 98.825 P = .0000

TABLE 12D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MVII FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	74.96	4302.446	28	.0000
2	18.42	2002.784	26	.0000
3	4.61	694.029	24	.0000
4	.75	129.479	22	.0000
5	.58	99.859	20	.0000
6	.36	62.506	18	.0000
7	.15	26.708	16	.0466

Wilks Lambda = .036 Trace = 7.9961
D. F. = 180, 18151
F = 49.989 P = .0000

TABLE 13D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON 16PF FOR MALE OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	39.12	161.673	26	.0000
2	15.79	66.737	24	.0000
3	9.62	40.931	22	.0095
4	9.28	39.474	20	.0067
5	6.98	29.741	18	.0419
6	6.82	29.066	16	.0248

Wilks Lambda = .821 Trace = .2025
D. F. = 176, 19394
F = 2.404 P = .0000

TABLE 14D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON 16PF FOR THE MALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	30.16	77.946	26	.0000
2	19.66	51.862	24	.0013
3	14.51	38.690	22	.0167*

Wilks Lambda = .661 Trace = .4293
D. F. = 176, 5753
F = 1.516 P = .0001

TABLE 15D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON 16PF FOR FEMALE OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	64.54	222.089	20	.0000
2	15.56	55.679	18	.0001
3	10.69	38.422	16	.0018
4	6.80	24.510	14	.0411

Wilks Lambda = .849 Trace = .1696
D. F. = 80, 10248
F = 4.424 P = .0000

TABLE 16D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON 16PF FOR FEMALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	64.13	172.664	20	.0000
2	15.40	43.600	18	.0010

Wilks Lambda = .809 Trace = .2220
D. F. = 80, 6200
F = 3.486 P = .0000

TABLE 17D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON 16PF FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	87.02	4119.342	35	.0000
2	4.42	316.133	33	.0000
3	2.30	167.290	31	.0000
4	1.71	124.505	29	.0000
5	1.36	99.176	27	.0000
6	.86	62.891	25	.0001
7	.68	49.657	23	.0015

Wilks Lambda = .359 Trace = 1.4948
D. F. = 320, 61828
F = 16.436 P = .0000

TABLE 18D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON 16PF FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	81.28	1752.802	35	.0000
2	6.69	209.786	33	.0000
3	2.84	91.471	31	.0000
4	2.30	74.425	29	.0001
5	1.60	52.009	27	.0034
6	1.34	43.836	25	.0127

Wilks Lambda = .344 Trace = 1.4905
D. F. = 320, 27526
F = 7.630 P = .0000

TABLE 19D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MIQ FOR MALE OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	28.07	197.363	40	.0000
2	15.02	107.886	38	.0000
3	12.02	86.807	36	.0000
4	11.34	81.926	34	.0001
5	8.97	65.104	32	.0009
6	6.86	49.952	30	.0142

Wilks Lambda = .713 Trace = .3458
D. F. = 330, 21867
F = 2.196 P = .0000

TABLE 20D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MIQ FOR MALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	22.51	98.025	40	.0000
2	14.09	63.111	38	.0079
3	13.90	62.269	36	.0054
4	11.42	51.608	34	.0297

Wilks Lambda = .492 Trace = .7428
D. F. = 330, 6389
F = 1.374 P = .0001

TABLE 21D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MIQ FOR FEMALE OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	75.93	969.451	34	.0000
2	15.00	229.610	32	.0000
3	4.53	71.974	30	.0001
4	3.31	52.807	28	.0040

Wilks Lambda = .532 Trace = .7586
D. F. = 150, 10459
F = 9.483 P = .0000

TABLE 22D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MIQ FOR FEMALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	79.06	663.504	34	.0000
2	9.09	96.086	32	.0000
3	5.93	63.523	30	.0007
4	3.98	42.987	28	.0375

Wilks Lambda = .503 Trace = .8507
D. F. = 150, 6300
F = 6.267 P = .0000

TABLE 23D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MIQ FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	63.58	2790.880	49	.0000
2	15.65	846.546	47	.0000
3	6.76	383.882	45	.0000
4	2.79	161.966	43	.0000
5	2.34	136.190	41	.0000
6	1.62	94.785	39	.0000
7	1.39	81.468	37	.0001
8	1.05	61.725	35	.0045
9	.97	57.108	33	.0070
10	.81	47.755	31	.0303

Wilks Lambda = .375 Trace = 1.1959
D. F. = 600, 81991
F = 8.278 P = .0000

TABLE 24D

SIGNIFICANT DISCRIMINANT FUNCTIONS ON MIQ FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

FUNCTION	% VARIANCE ACCOUNTED FOR	CHI-SQUARE	D. F.	P
1	58.59	1329.962	49	.0000
2	16.72	467.705	47	.0000
3	5.56	166.718	45	.0000
4	3.35	101.946	43	.0000
5	2.79	85.371	41	.0002
6	2.46	75.329	39	.0008
7	2.04	62.563	37	.0067
8	1.69	52.195	35	.0339
9	1.61	49.754	33	.0336

Wilks Lambda =.314 Trace = 1.4154
D. F. = 600, 36390
F = 4.368 P = .0000

APPENDIX E

GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS

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TABLE 1E

GATB GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR MALE OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4
ELECTRONICS	142.315 (10.036)	3.410 (11.105)	26.523 (10.820)	4.180 (8.460)
POWER AND HOME ELECTRICITY	134.213 (10.232)	5.897 (12.753)	27.249 (11.537)	6.371 (7.475)
CARPENTRY	132.361 (10.822)	8.508 (11.376)	25.442 (11.008)	4.975 (7.255)
AUTOMOTIVE	132.812 (11.204)	5.493 (12.437)	28.435 (11.776)	4.763 (8.273)
MECHANICAL DRAFTING AND DESIGN	141.233 (9.913)	8.981 (10.558)	27.821 (10.641)	5.687 (8.403)
DIESEL MECHANICS	134.233 (10.498)	5.081 (11.960)	24.660 (11.805)	2.120 (7.238)
MACHINE SHOP	133.765 (10.916)	5.840 (11.878)	24.811 (11.169)	5.020 (8.048)
WELDING	128.387 (11.316)	5.425 (12.478)	28.810 (10.257)	5.067 (7.736)
FARM EQUIPMENT MECHANICS	133.258 (9.782)	5.023 (12.256)	23.711 (9.838)	5.229 (7.362)
AIRCRAFT MECHANICS	137.707 (9.896)	5.626 (9.937)	30.456 (11.341)	4.970 (8.637)
AGRI-TECHNOLOGY	133.022 (10.359)	1.308 (12.383)	23.073 (9.396)	6.365 (7.761)
OPTICAL TECHNOLOGY	141.942 (13.240)	-2.943 (13.388)	28.716 (8.384)	6.471 (8.556)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with P <.05

TABLE 2E

GATB GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR MALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3
ELECTRONICS	130.534 (11.475)	21.220 (11.452)	16.625 (10.279)
POWER AND HOME ELECTRICITY	122.801 (8.812)	18.206 (12.867)	18.917 (8.603)
CARPENTRY	119.570 (11.356)	21.020 (10.668)	20.222 (10.091)
AUTOMOTIVE	120.949 (11.529)	18.679 (13.340)	17.948 (8.887)
MECHANICAL DRAFTING AND DESIGN	128.956 (10.617)	22.424 (12.120)	21.362 (9.848)
DIESEL MECHANICS	122.675 (9.526)	22.963 (14.048)	18.010 (11.222)
MACHINE SHOP	119.958 (10.291)	17.469 (13.184)	19.344 (8.951)
WELDING	116.214 (8.828)	19.300 (10.486)	17.230 (9.508)
FARM EQUIPMENT MECHANICS	118.752 (7.511)	20.274 (14.977)	17.340 (8.096)
AIRCRAFT MECHANICS	127.725 (11.352)	20.001 (10.331)	13.250 (7.801)
AGRI-TECHNOLOGY	125.711 (7.284)	9.414 (17.538)	22.148 (8.050)
OPTICAL TECHNOLOGY	130.571 (11.627)	9.536 (13.091)	17.077 (10.474)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 3E

GATB GROUP CENTROID AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR FEMALE OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4
PRACTICAL NURSING	165.578 (13.903)	33.330 (13.174)	-5.272 (5.306)	67.697 (14.332)
COSMETOLOGY	155.317 (14.317)	34.666 (11.482)	-4.674 (5.253)	70.629 (11.736)
DENTAL ASSISTANT	160.880 (15.490)	36.860 (11.271)	-3.244 (5.035)	67.792 (13.388)
MEDICAL LABORATORY ASSISTANT	177.454 (16.188)	39.894 (11.732)	-7.787 (5.787)	71.719 (12.263)
CLERICAL TRAINING	157.391 (14.164)	29.055 (11.967)	-5.795 (5.272)	68.844 (12.726)
SECRETARIAL TRAINING	168.185 (15.049)	29.015 (12.176)	-4.859 (5.041)	69.613 (13.174)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 4E

GATB GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR FEMALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4
PRACTICAL NURSING	155.335 (12.450)	23.866 (13.509)	19.094 (6.671)	29.970 (7.433)
COSMETOLOGY	146.810 (12.390)	27.922 (12.002)	21.126 (6.887)	31.381 (5.722)
DENTAL ASSISTANT	155.752 (10.441)	29.088 (10.802)	21.202 (7.295)	30.321 (7.006)
MEDICAL LABORATORY ASSISTANT	171.090 (11.806)	30.450 (11.748)	17.876 (6.539)	32.846 (5.823)
CLERICAL TRAINING	149.944 (12.500)	20.661 (12.262)	18.754 (6.534)	31.283 (6.590)
SECRETARIAL TRAINING	157.549 (12.787)	19.885 (12.571)	20.322 (6.755)	30.948 (6.471)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 5E

GATB GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6
ELECTRONICS	91.261 (9.568)	136.611 (14.173)	43.237 (10.296)	41.288 (11.698)	24.352 (12.592)	-10.545 (3.717)
POWER AND HOME ELECTRICITY	87.542 (9.729)	126.963 (15.873)	40.457 (11.861)	43.890 (10.595)	24.541 (13.473)	-9.847 (3.281)
PRACTICAL NURSING	102.976 (10.969)	126.834 (15.070)	43.116 (11.531)	40.917 (12.720)	25.427 (13.516)	-10.099 (3.638)
CARPENTRY	83.939 (9.101)	126.829 (15.528)	40.503 (10.635)	43.507 (10.973)	26.183 (10.831)	-10.062 (3.223)
AUTOMOTIVE	86.909 (10.100)	124.394 (16.820)	42.196 (11.798)	42.432 (11.750)	24.310 (12.059)	-10.036 (3.820)
MECHANICAL DRAFTING AND DESIGN	89.297 (10.076)	135.701 (13.293)	43.885 (11.278)	46.001 (10.453)	27.220 (12.792)	-9.982 (3.595)
DIESEL MECHANICS	85.902 (9.229)	127.767 (16.131)	42.319 (11.944)	39.053 (11.037)	27.626 (11.209)	-10.656 (3.344)
MACHINE SHOP	86.192 (9.522)	127.667 (14.729)	39.667 (11.984)	42.245 (11.241)	25.821 (12.744)	-10.375 (3.530)
WELDING	85.457 (10.021)	118.484 (16.362)	40.954 (11.075)	42.574 (10.821)	23.958 (12.426)	-10.092 (3.424)
FARM EQUIPMENT MECHANICS	86.494 (9.455)	127.086 (14.607)	38.836 (11.451)	41.152 (9.467)	27.506 (11.487)	-10.008 (3.481)
COSMETOLOGY	98.936 (9.754)	118.346 (15.280)	43.865 (10.789)	43.166 (10.058)	29.179 (12.078)	-9.678 (3.757
AIRCRAFT MECHANICS	89.190 (9.492)	129.859 (14.791)	45.353 (10.702)	42.758 (12.141)	24.015 (9.828)	-9.234 (3.017)
DENTAL ASSISTANT	103.165 (12.458)	119.820 (15.257)	46.625 (11.273)	40.338 (11.016)	26.784 (11.624)	-9.302 (3.664)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with P <.05

TABLE 5E (Continued)

GATB GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6
AGRI-TECHNOLOGY	87.867 (9.500)	126.926 (15.436)	36.663 (10.027)	39.215 (10.749)	24.604 (12.226)	-9.553 (3.584)
OPTICAL TECHNOLOGY	96.656 (11.479)	132.379 (17.875)	42.086 (8.185)	39.458 (14.116)	22.491 (13.710)	-9.627 (4.028)
MEDICAL LABORATORY ASSIST.	105.586 (12.601)	140.734 (16.826)	49.663 (10.512)	42.302 (10.213)	26.103 (12.882)	-11.279 (3.556)
SALES	93.213 (9.780)	126.251 (16.457)	39.069 (10.786)	42.147 (10.852)	25.715 (12.564)	-10.172 (3.696)
ACCOUNTING	96.276 (10.712)	132.940 (15.119)	35.714 (10.741)	42.614 (11.836)	26.894 (12.511)	-9.975 (3.604)
CLERICAL TRAINING	99.543 (10.271)	120.134 (15.971)	39.349 (11.587)	43.517 (10.495)	25.828 (12.361)	-10.531 (3.533)
SECRETARIAL TRAINING	104.770 (10.747)	128.078 (15.567)	40.171 (11.339)	43.498 (11.603)	23.836 (12.633)	-9.888 (3.606)
DATA PROCESSING	97.834 (10.484)	132.348 (15.290)	39.517 (11.316)	42.106 (11.018)	27.575 (12.201)	-9.742 (3.547)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 6E

GATB GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4
ELECTRONICS	92.209 (10.615)	133.073 (12.981)	18.600 (8.421)	32.533 (13.372)
POWER AND HOME ELECTRICITY	89.914 (9.254)	122.329 (13.920)	16.846 (9.898)	36.609 (12.080)
PRACTICAL NURSING	105.072 (10.662)	121.870 (14.396)	18.902 (11.321)	35.065 (12.940)
CARPENTRY	86.210 (9.468)	121.557 (13.888)	16.445 (9.715)	38.557 (11.541)
AUTOMOTIVE	88.255 (10.632)	120.780 (16.344)	17.209 (10.178)	35.899 (11.138)
MECHANICAL DRAFTING AND DESIGN	92.421 (10.725)	131.492 (12.643)	17.163 (11.235)	40.078 (9.765)
DIESEL MECHANICS	87.368 (9.130)	124.903 (15.903)	19.939 (10.472)	37.817 (13.830)
MACHINE SHOP	87.467 (8.931)	120.427 (14.778)	14.760 (10.278)	34.895 (13.546)
WELDING	85.293 (9.385)	115.328 (10.177)	18.209 (10.583)	36.717 (13.488)
FARM EQUIPMENT MECHANICS	85.245 (7.470)	120.292 (14.381)	16.622 (9.948)	33.964 (11.236)
COSMETOLOGY	101.367 (9.271)	113.794 (15.054)	21.416 (9.550)	40.615 (11.941)
AIRCRAFT MECHANICS	91.552 (9.056)	126.786 (15.757)	23.420 (10.652)	33.462 (10.717)

NOTE: Standard deviations in parentheses
*** Discriminant functions having a χ^2 with a P <.05**

TABLE 6E (Continued)

GATB GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4
DENTAL ASSISTANT	108.000 (12.527)	120.076 (13.229)	23.641 (9.700)	38.561 (12.255)
AGRI-TECHNOLOGY	95.976 (9.803)	121.500 (14.906)	12.452 (9.294)	37.080 (12.014)
OPTICAL TECHNOLOGY	99.445 (10.894)	123.074 (14.677)	18.824 (9.254)	33.013 (16.737)
MEDICAL LABORATORY ASSISTANT	109.323 (12.132)	140.057 (13.702)	23.180 (9.962)	36.982 (12.101)
SALES	91.771 (8.757)	120.125 (16.419)	16.946 (9.261)	33.076 (13.314)
ACCOUNTING	100.519 (9.388)	126.512 (13.999)	11.796 (9.858)	37.538 (11.789)
CLERICAL TRAINING	102.644 (10.275	116.722 (14.842)	15.843 (10.377)	35.867 (11.782)
SECRETARIAL TRAINING	107.415 (10.795)	122.728 (14.628)	15.758 (10.380)	36.456 (11.594)
DATA PROCESSING	100.174 (11.084)	129.074 (13.353)	17.477 (10.017)	38.171 (11.641)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P <.05$

TABLE 7E

MVII GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR MALE OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6
ELECTRONICS	10.836 (2.511)	2.075 (2.626)	4.301 (1.795)	3.347 (1.622)	10.398 (2.061)	11.292 (2.010)
POWER AND HOME ELECTRICITY	9.013 (2.950)	1.408 (2.348)	4.985 (1.694)	3.044 (1.679)	10.245 (1.819)	10.910 (1.812)
CARPENTRY	1.863 (2.936)	2.694 (2.499)	5.611 (1.886)	3.467 (1.729)	10.181 (1.870)	11.217 (1.709)
AUTOMOTIVE	5.216 (3.140)	.298 (2.205)	4.370 (1.829)	2.945 (1.439)	10.252 (1.710)	11.001 (1.693)
MECHANICAL DRAFTING AND DESIGN	4.146 (3.448)	1.810 (2.470)	3.623 (2.163)	3.828 (2.096)	10.586 (1.988)	10.940 (1.823)
DIESEL MECHANICS	5.122 (3.044)	.081 (2.349)	4.393 (2.083)	3.223 (1.531)	10.087 (1.474)	11.435 (1.789)
MACHINE SHOP	4.124 (3.444)	.577 (2.218)	4.462 (1.837)	2.967 (1.686)	10.632 (2.040)	11.512 (1.595)
WELDING	4.199 (3.240)	.739 (2.545)	3.869 (2.123)	3.079 (1.443)	10.115 (1.799)	11.054 (1.954)
FARM EQUIPMENT MECHANICS	5.118 (3.340)	.590 (1.916)	4.459 (2.199)	2.960 (1.595)	10.523 (1.609)	10.994 (2.035)
AIRCRAFT MECHANICS	6.530 (3.068)	.292 (2.143)	3.896 (1.728)	3.886 (1.485)	10.019 (1.628)	11.562 (1.594)
AGRI-TECHNOLOGY	4.575 (3.240)	3.511 (3.003)	3.305 (2.284)	2.080 (2.289)	10.219 (2.390)	11.304 (2.290)
OPTICAL TECHNOLOGY	6.031 (4.059)	3.052 (3.097)	3.278 (2.352)	4.035 (1.936)	9.313 (2.024)	11.088 (2.194)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 8E

MVII GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR MALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4
ELECTRONICS	9.912 (2.826)	-.536 (2.044)	-1.293 (1.644)	6.150 (1.891)
POWER AND HOME ELECTRICITY	8.991 (2.156)	-.664 (2.101)	-.403 (1.578)	6.162 (2.074)
CARPENTRY	1.706 (2.322)	.395 (1.915)	.001 (1.794)	5.820 (1.870)
AUTOMOTIVE	4.977 (2.879)	-2.002 (1.726)	-1.044 (1.728)	6.231 (1.673)
MECHANICAL DRAFTING AND DESIGN	4.007 (3.382)	-.520 (2.166)	-1.898 (2.148)	6.080 (2.445)
DIESEL MECHANICS	4.101 (2.853)	-1.928 (2.654)	-1.551 (2.105)	5.295 (1.577)
MACHINE SHOP	4.151 (3.066)	-1.544 (1.718)	-.977 (1.516)	6.684 (2.532)
WELDING	3.747 (2.989)	-1.411 (1.890)	-1.113 (1.452)	6.089 (1.912)
FARM EQUIPMENT MECHANICS	5.169 (3.180)	-1.695 (1.710)	-.957 (1.662)	6.011 (1.544)
AIRCRAFT MECHANICS	5.400 (3.084)	-2.248 (1.850)	-1.512 (1.758)	5.297 (1.493)
AGRI-TECHNOLOGY	4.074 (3.622)	.400 (1.739)	-1.808 (1.944)	7.831 (3.840)
OPTICAL TECHNOLOGY	6.248 (3.658)	1.381 (2.516)	-2.279 (2.196)	5.402 (2.180)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 9E

MVII GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR FEMALE OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4
PRACTICAL NURSING	3.454 (3.184)	9.084 (2.840)	1.202 (1.736)	14.876 (1.524)
COSMETOLOGY	-4.441 (4.593)	5.963 (4.007)	1.196 (2.346)	14.731 (1.491)
DENTAL ASSISTANT	-1.449 (3.964)	9.060 (3.521)	1.432 (1.593)	14.929 (1.515)
MEDICAL LABORATORY ASSIST.	3.701 (3.957)	8.248 (4.057)	3.200 (3.059)	14.556 (1.395)
CLERICAL TRAINING	-8.684 (4.550)	8.545 (3.169)	1.491 (1.714)	15.056 (1.574)
SECRETARIAL TRAINING	-8.404 (4.838)	9.293 (3.080)	1.291 (1.664)	14.680 (1.632)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 10E

MVII GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR FEMALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3
PRACTICAL NURSING	2.175 (3.046)	8.494 (2.850)	.413 (1.728)
COSMETOLOGY	-5.998 (4.316)	5.386 (4.188)	.385 (2.155)
DENTAL ASSISTANT	-2.994 (3.720)	9.195 (2.763)	-.084 (1.604)
MEDICAL LABORATORY ASSISTANT	3.084 (2.522)	7.786 (3.334)	-1.343 (2.384)
CLERICAL TRAINING	-9.827 (4.483)	8.030 (3.141)	.157 (1.623)
SECRETARIAL TRAINING	-9.955 (4.376)	8.703 (3.118)	.259 (1.550)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 11E

MVII GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7	FUNCTION 8
ELECTRONICS	14.034 (4.826)	-4.409 (3.115)	8.593 (2.514)	5.205 (1.746)	12.514 (2.091)	-.797 (1.985)	4.042 (1.770)	15.844 (1.743)
POWER AND HOME ELECTRICITY	15.417 (4.572)	-4.652 (2.692)	6.810 (2.910)	5.184 (1.698)	12.158 (1.946)	-.244 (1.656)	4.178 (1.768)	15.826 (1.611)
PRACTICAL NURSING	-5.085 (2.218)	4.862 (3.300)	3.299 (1.499)	4.741 (1.624)	12.770 (2.315)	-.819 (2.458)	4.227 (1.728)	15.861 (1.744)
CARPENTRY	13.248 (4.927)	-4.761 (2.765)	-.291 (2.964)	6.240 (1.598)	12.666 (1.821)	-.033 (1.763)	4.013 (1.608)	15.704 (1.713)
AUTOMOTIVE	15.738 (4.278)	-4.830 (2.083)	2.970 (3.149)	4.280 (1.711)	12.247 (1.841)	-.558 (1.418)	4.206 (1.678)	15.749 (1.682)
MECHANICAL DRAFTING AND DESIGN	12.685 (5.256	-4.319 (3.029)	1.923 (3.459)	4.898 (1.727)	12.179 (2.004)	-1.286 (1.897)	3.761 (1.819)	16.080 (1.700)
DIESEL MECHANICS	16.204 (4.516)	-4.420 (2.642)	2.756 (3.045)	4.105 (1.894)	12.632 (1.916)	-.448 (1.496)	3.983 (1.328)	15.801 (1.491)
MACHINE SHOP	15.446 (4.467)	-5.077 (2.593)	1.837 (3.473)	4.424 (1.540)	12.925 (1.760)	-.576 (1.518)	4.160 (1.772)	15.971 (1.594)
WELDING	14.185 (5.293)	-4.347 (2.344)	1.980 (3.238)	4.249 (1.881)	12.276 (2.126)	-.805 (1.497)	4.192 (1.550)	15.681 (1.988)
FARM EQUIPMENT MECHANICS	15.564 (4.385)	-5.088 (2.436)	2.891 (3.275)	4.584 (1.638)	12.291 (2.245)	-.670 (1.535)	4.389 (1.699)	16.030 (1.593)

NOTE: Standard deviations in parentheses
* Discriminant functions having a X^2 with $P < .05$

TABLE 11E (Continued)

MVII GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7	FUNCTION 8
COSMETOLOGY	-3.151 (4.045)	-3.242 (4.879)	2.954 (1.910)	4.901 (1.664)	10.465 (2.818)	-.405 (2.403)	4.052 (1.702)	15.971 (1.731)
AIRCRAFT MECHANICS	16.789 (3.344)	-3.808 (2.212)	4.018 (3.181)	3.844 (1.765)	12.687 (1.773)	-1.101 (1.685)	3.916 (1.637)	15.871 (1.495)
DENTAL ASSISTANT	-4.990 (3.358)	-.201 (4.080)	3.389 (1.580)	4.873 (1.761)	12.770 (2.668)	-.685 (2.402)	3.964 (1.495)	15.957 (1.792)
AGRI-TECHNOLOGY	8.785 (6.234)	-5.146 (4.507)	2.682 (3.152)	5.244 (1.954)	12.320 (2.538)	-.590 (1.894)	4.761 (1.694)	15.870 (1.957)
OPTICAL TECHNOLOGY	10.260 (6.340)	-2.711 (2.998)	3.846 (3.939)	5.344 (2.021)	12.080 (2.390)	-1.377 (1.920)	4.145 (1.560)	15.317 (1.934)
MEDICAL LABORATORY ASSIST.	-3.524 (5.102)	5.275 (3.932)	3.756 (1.848)	4.315 (1.568)	13.249 (2.738)	.199 (2.315)	3.609 (1.560)	15.622 (1.657)
SALES	1.697 (5.998)	-6.510 (4.151)	2.979 (2.935)	5.527 (1.872)	11.307 (2.690)	-2.200 (2.517)	4.297 (2.016)	15.496 (1.780)
ACCOUNTING	-1.712 (5.333)	-10.407 (4.097)	3.061 (2.314)	4.750 (1.818)	13.151 (2.338)	-.858 (2.139)	4.229 (1.660)	15.979 (1.839)
CLERICAL TRAINING	-4.663 (3.115)	-7.776 (4.809)	3.541 (1.759)	4.595 (1.658)	12.145 (2.435)	-.507 (2.318)	4.185 (1.597)	15.996 (1.753)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 11E (Continued)

MVII GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7	FUNCTION 8
SECRETARIAL TRAINING	-5.342 (2.878)	-7.583 (5.108)	3.488 (1.712)	4.560 (1.608)	12.447 (2.346)	-.589 (2.168)	4.028 (1.544)	15.598 (1.782)
DATA PROCESSING	-.415 (6.009)	-8.173 (4.691)	3.889 (2.829)	5.296 (1.658)	13.116 (2.297)	-.898 (2.274)	3.969 (1.680)	15.899 (1.596)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 12E

MVII GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7
ELECTRONICS	17.030 (4.522)	-5.030 (3.247)	6.978 (2.878)	-.746 (1.633)	13.592 (2.086)	3.346 (1.800)	12.017 (1.819)
POWER AND HOME ELECTRICITY	17.614 (4.284)	-5.469 (2.764)	6.190 (2.135)	-.244 (1.656)	13.243 (1.846)	3.029 (1.485)	12.028 (1.658)
PRACTICAL NURSING	-1.890 (1.942)	3.550 (3.158)	2.359 (1.431)	-.905 (1.584)	13.506 (2.352)	3.394 (2.242)	12.095 (1.742)
CARPENTRY	15.717 (4.172)	-5.392 (2.486)	-1.073 (2.412)	.608 (1.540)	14.080 (1.672)	2.721 (1.542)	11.950 (1.595)
AUTOMOTIVE	18.311 (3.588)	-5.652 (2.056)	2.026 (2.937)	-1.447 (1.620)	13.051 (1.613)	3.169 (1.265)	12.096 (1.843)
MECHANICAL DRAFTING AND DESIGN	15.193 (5.179)	-5.289 (2.720)	1.084 (3.470)	-.886 (1.869)	13.276 (2.122)	3.650 (1.641)	11.530 (1.821)
DIESEL MECHANICS	18.787 (4.152)	-4.845 (2.631)	.967 (3.024)	-1.716 (2.350)	13.325 (1.788)	3.371 (1.561)	11.765 (1.200)
MACHINE SHOP	17.509 (4.386)	-6.135 (2.732)	1.222 (3.048)	-1.170 (1.445)	13.586 (1.865)	3.125 (1.361)	12.153 (1.614)
WELDING	17.001 (4.259)	-5.311 (1.940)	.869 (3.045)	-1.081 (1.583)	13.075 (2.015)	3.218 (1.432)	12.003 (1.661)
FARM EQUIPMENT MECHANICS	18.142 (3.528)	-5.612 (1.992)	2.210 (3.076)	-1.095 (1.601)	12.831 (2.236)	3.222 (1.073)	12.013 (2.137)

NCTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 12E (Continued)

MVII GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS*
FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7
COSMETOLOGY	-.046 (3.584)	-4.875 (4.614)	2.031 (1.835)	-.226 (1.749)	11.753 (2.855)	3.177 (2.149)	12.048 (1.799)
AIRCRAFT MECHANICS	19.651 (2.934)	-4.772 (2.369)	2.233 (3.200)	-1.916 (1.764)	13.403 (1.862)	3.453 (1.172)	12.003 (1.469)
DENTAL ASSISTANT	-1.933 (1.920)	-1.826 (3.803)	2.367 (1.503)	-.964 (1.954)	14.318 (1.858)	2.924 (2.158)	11.732 (1.453)
AGRI-TECHNOLOGY	12.976 (5.226)	-6.092 (4.045)	1.186 (3.517)	-.422 (1.339)	14.459 (1.810)	3.485 (1.768)	12.809 (1.440)
OPTICAL TECHNOLOGY	12.324 (6.258)	-2.992 (2.974)	3.418 (3.586)	-.069 (1.828)	13.870 (2.522)	3.786 (1.852)	11.997 (1.482)
MEDICAL LABORATORY ASSISTANT	-.894 (3.511)	4.630 (2.598)	3.012 (1.825)	-1.356 (1.796)	13.549 (2.394)	2.235 (2.118)	11.499 (1.619)
SALES	4.653 (5.668)	-7.507 (4.236)	2.048 (2.047)	-.367 (1.732)	13.074 (2.846)	5.163 (2.501)	11.790 (1.619)
ACCOUNTING	.601 (4.179)	-11.110 (4.090)	2.090 (1.959)	-1.087 (1.860)	13.647 (2.299)	3.353 (2.016)	12.282 (1.737)
CLERICAL TRAINING	-1.169 (2.341)	-8.982 (4.750)	2.517 (1.550)	-.818 (1.688)	13.241 (2.416)	3.157 (2.149)	12.067 (1.650)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 12E (Continued)

MVII GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7
SECRETARIAL TRAINING	-1.612 (2.329)	-9.196 (4.642)	2.503 (1.607)	-.961 (1.638)	13.428 (2.290)	3.195 (1.955)	11.877 (1.662)
DATA PROCESSING	2.158 (5.378)	-9.273 (4.389)	3.419 (2.524)	-.599 (1.720)	14.588 (2.161)	3.479 (2.108)	11.805 (1.730)

NOTE: Standard deviations in parentheses

* Discriminant functions having a χ^2 with $P < .05$

TABLE 13E

16 PERSONALITY FACTOR QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR MALE OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6
ELECTRONICS	6.869 (1.820)	5.857 (2.014)	.498 (1.607)	-1.242 (1.819)	-.266 (1.859)	1.088 (1.810)
POWER AND HOME ELECTRICITY	6.148 (1.835)	5.765 (1.914)	.477 (1.721)	-1.687 (1.751)	.344 (1.742)	1.617 (1.732)
CARPENTRY	5.612 (1.689)	5.252 (2.005)	.423 (1.805)	-1.631 (1.749)	-.374 (1.720)	1.246 (1.725)
AUTOMOTIVE	5.938 (1.601)	5.579 (1.949)	.296 (1.623)	-1.406 (1.734)	-.092 (1.840)	1.418 (1.877)
MECHANICAL DRAFTING AND DESIGN	6.834 (1.746)	5.072 (1.885)	.241 (1.732)	-1.647 (1.699)	-.222 (2.028)	1.138 (2.042)
DIESEL MECHANICS	5.915 (1.634)	5.968 (1.746)	.057 (1.932)	-1.900 (1.753)	-.082 (1.806)	1.597 (1.744)
MACHINE SHOP	5.800 (1.777)	5.156 (1.945)	.120 (2.028)	-1.563 (1.781)	-.050 (1.875)	1.331 (1.920)
WELDING	5.658 (1.767)	5.138 (1.787)	.636 (1.780)	-1.080 (1.864)	-.048 (1.929)	1.308 (2.079)
FARM EQUIPMENT MECHANICS	5.476 (1.592)	5.510 (1.495)	.348 (1.893)	-1.923 (1.664)	-.696 (1.985)	.626 (2.036)
AIRCRAFT MECHANICS	6.775 (1.590)	5.494 (2.002)	.864 (1.600)	-1.175 (1.634)	-.318 (1.652)	1.547 (1.773)
AGRI-TECHNOLOGY	5.552 (1.645)	6.284 (1.925)	.559 (1.585)	-1.252 (1.922)	-.412 (1.844)	.930 (1.835)
OPTICAL TECHNOLOGY	6.312 (1.515)	5.991 (1.902)	-.799 (1.774)	-1.929 (1.941)	-.275 (1.580)	1.313 (1.818)

NOTE: Standard deviations in parentheses

* Discriminant functions having a χ^2 with $P < .05$

TABLE 14E

16 PERSONALITY FACTORS QUESTIONNAIRE GROUPS CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR MALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3
ELECTRONICS	6.665 (1.848)	2.953 (2.112)	3.476 (1.986)
POWER AND HOME ELECTRICITY	5.362 (1.967)	3.629 (1.991)	3.234 (1.828)
CARPENTRY	4.082 (1.727)	2.896 (1.666)	4.133 (1.876)
AUTOMOTIVE	4.872 (1.685)	3.498 (2.006)	3.362 (1.716)
MECHANICAL DRAFTING AND DESIGN	5.354 (1.680)	1.972 (1.828)	3.528 (1.759)
DIESEL MECHANICS	5.408 (2.323)	2.834 (2.060)	4.501 (1.876)
MACHINE SHOP	4.544 (1.834)	2.951 (1.845)	3.387 (2.021)
WELDING	4.515 (1.853)	2.884 (1.863)	3.347 (1.982)
FARM EQUIPMENT MECHANICS	4.617 (1.588)	2.958 (1.517)	2.833 (1.918)
AIRCRAFT MECHANICS	5.566 (1.465)	3.124 (2.195)	4.769 (1.865)
AGRI-TECHNOLOGY	5.480 (1.858)	4.390 (1.327)	4.284 (2.094)
OPTICAL TECHNOLOGY	5.312 (1.764)	2.811 (2.147)	2.814 (2.163)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 15E

16 PERSONALITY FACTOR QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR FEMALE OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4
PRACTICAL NURSING	6.052 (2.569)	3.446 (1.606)	3.969 (1.785)	9.844 (2.023)
COSMETOLOGY	4.816 (2.302)	2.894 (1.716)	3.772 (1.980)	10.222 (2.113)
DENTAL ASSISTANT	4.533 (2.195)	2.845 (1.711)	4.670 (1.896)	10.493 (1.914)
MEDICAL LABORATORY ASSISTANT	6.107 (2.531)	2.826 (1.688)	5.432 (2.188)	9.714 (2.621)
CLERICAL TRAINING	4.127 (2.283)	3.190 (1.592)	4.025 (1.998)	9.636 (1.994)
SECRETARIAL TRAINING	4.345 (2.232)	3.625 (1.679)	4.159 (1.923)	10.031 (1.888)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 16E

16 PERSONALITY FACTOR QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR FEMALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2
PRACTICAL NURSING	5.849 (2.575)	1.479 (1.844)
COSMETOLOGY	4.432 (2.515)	2.215 (2.081)
DENTAL ASSISTANT	4.090 (2.222)	2.840 (2.057)
MEDICAL LABORATORY ASSIST.	5.761 (2.568)	3.256 (2.119)
CLERICAL TRAINING	3.825 (2.276)	1.681 (1.942)
SECRETARIAL TRAINING	3.855 (2.163)	1.572 (1.992)

NOTE: Standard Deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 17E

16 PERSONALITY FACTOR QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7
ELECTRONICS	3.375	8.769	3.844	-.200	1.422	4.708	3.543
	(2.024)	(2.458)	(1.779)	(2.202)	(1.935)	(1.795)	(1.956)
POWER AND HOME ELECTRICITY	3.361	8.569	3.174	-.458	.840	4.311	3.659
	(2.003)	(2.155)	(1.875)	(2.206)	(1.782)	(1.816)	(1.902)
PRACTICAL NURSING	8.664	9.182	3.063	-.659	1.003	4.206	3.404
	(2.178)	(2.399)	(1.711)	(2.035)	(1.915)	(1.780)	(1.745)
CARPENTRY	3.278	7.646	3.014	-.479	.817	4.070	3.598
	(1.939)	(2.317)	(1.592)	(2.213)	(1.770)	(1.906)	(2.036)
AUTOMOTIVE	3.538	7.885	3.299	-.228	1.053	4.456	3.323
	(1.922)	(2.085)	(1.696)	(2.052)	(1.874)	(1.816)	(1.934)
MECHANICAL DRAFTING AND DESIGN	3.376	8.375	4.166	-.213	1.020	4.073	3.739
	(1.946)	(2.291)	(1.819)	(2.056)	(1.866)	(1.772)	(1.900)
DIESEL MECHANICS	3.196	8.134	3.165	-.700	.634	4.752	3.251
	(1.954)	(2.174)	(1.513)	(2.208)	(1.867)	(1.647)	(2.094)
MACHINE SHOP	3.517	7.772	3.274	-.187	.747	4.011	3.152
	(2.045)	(2.161)	(1.766)	(1.973)	(2.109)	(1.799)	(1.928)
WELDING	3.430	7.662	3.043	.075	1.274	4.024	3.307
	(2.160)	(2.230)	(1.743)	(2.108)	(1.919)	(1.845)	(1.970)
FARM EQUIPMENT MECHANICS	3.345	7.350	2.961	-.894	.911	4.434	3.815
	(1.916)	(1.986)	(1.663)	(2.014)	(1.698)	(1.560)	(2.215)
COSMETOLOGY	8.736	8.117	3.057	.154	1.048	4.160	3.760
	(2.124)	(2.244)	(1.781)	(2.031)	(1.849)	(1.868)	(1.714)
AIRCRAFT MECHANICS	3.246	8.878	3.643	-.585	1.531	4.052	3.532
	(1.970)	(2.182)	(1.726)	(1.818)	(1.788)	(1.761)	(1.873)
DENTAL ASSISTANT	8.862	8.111	3.565	.766	1.049	4.052	3.147
	(2.409)	(2.124)	(1.743)	(1.998)	(1.462)	(1.770)	(1.946)

NOTE: Standard deviations in parentheses

* Discriminant functions having a χ^2 with $P < .05$

TABLE 17E (Continued)

16 PERSONALITY FACTOR QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7
AGRI-TECHNOLOGY	3.995	8.040	2.627	-.191	.962	4.828	3.724
	(2.302)	(2.062)	(1.770)	(2.298)	(1.831)	(1.701)	(1.895)
OPTICAL TECHNOLOGY	3.855	8.585	3.578	.002	.255	4.770	2.494
	(2.122)	(2.237)	(1.699)	(2.154)	(2.049)	(1.669)	(1.506)
MEDICAL LABORATORY ASSISTANT	8.158	9.503	3.821	.075	1.475	4.185	2.759
	(2.494)	(2.430)	(1.795)	(2.439)	(2.244)	(1.649)	(1.882)
SALES	6.444	9.420	3.142	1.154	.585	4.491	3.666
	(2.678)	(2.354)	(1.737)	(1.971)	(2.014)	(1.786)	(1.883)
ACCOUNTING	6.529	7.834	3.576	-.508	.537	4.220	3.466
	(2.791)	(2.237)	(1.662)	(2.146)	(1.884)	(1.758)	(1.851)
CLERICAL TRAINING	8.600	7.457	3.358	-.137	1.251	4.328	3.475
	(2.157)	(2.119)	(1.749)	(2.086)	(1.787)	(1.721)	(1.808)
SECRETARIAL TRAINING	9.015	7.776	3.586	-.376	.944	4.432	3.466
	(2.046)	(2.123)	(1.688)	(2.054)	(1.796)	(1.661)	(1.845)
DATA PROCESSING	6.331	8.308	3.694	-.088	.375	4.277	3.521
	(2.885)	(2.528)	(2.002)	(2.216)	(1.927)	(1.617)	(1.877)

NOTE: Standard deviations in parentheses

* Discriminant functions having a χ^2 with $P < .05$

TABLE 18E

16 PERSONALITY FACTOR QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6
ELECTRONICS	3.241 (2.154)	8.784 (2.963)	4.672 (2.666)	6.020 (1.928)	3.906 (1.868)	.321 (1.738)
POWER AND HOME ELECTRICITY	3.598 (2.066)	8.305 (2.369)	3.081 (2.502)	5.396 (1.793)	3.530 (2.054)	.087 (1.793)
PRACTICAL NURSING	8.613 (2.216)	9.122 (2.531)	2.737 (2.208)	5.320 (1.890)	3.780 (1.973)	.681 (1.803)
CARPENTRY	3.473 (1.918)	7.026 (2.136)	2.288 (2.260)	4.926 (1.935)	3.999 (1.988)	.996 (1.782)
AUTOMOTIVE	3.816 (1.755)	7.731 (2.247)	2.846 (2.250)	5.372 (1.879)	3.773 (1.960)	.218 (1.614)
MECHANICAL DRAFTING AND DESIGN	3.693 (1.894)	7.276 (2.432)	4.138 (2.287)	5.374 (1.819)	3.853 (1.880)	1.076 (1.686)
DIESEL MECHANICS	2.634 (1.880)	8.006 (2.225)	3.173 (2.471)	5.264 (1.554)	4.214 (2.056)	1.066 (1.903)
MACHINE SHOP	3.781 (1.909)	7.521 (2.103)	2.712 (2.392)	4.895 (1.939)	3.600 (2.186)	.699 (1.910)
WELDING	3.479 (2.051)	7.586 (2.300)	3.144 (2.494)	4.642 (1.844)	3.401 (1.710)	.706 (1.742)
FARM EQUIPMENT MECHANICS	3.386 (1.937)	6.762 (1.724)	2.652 (1.927)	5.970 (1.765)	2.776 (2.142)	.131 (1.542)
COSMETOLOGY	8.685 (2.060)	7.827 (2.441)	3.333 (2.537)	4.856 (1.719)	3.598 (1.889)	.404 (1.666)
AIRCRAFT MECHANICS	2.600 (1.633)	8.071 (2.376)	3.202 (2.013)	5.781 (1.943)	4.557 (1.690)	1.012 (2.034)
DENTAL ASSISTANT	8.861 (2.296)	7.823 (2.053)	4.568 (2.136)	4.366 (1.500)	3.412 (1.726)	.332 (1.477)
AGRI-TECHNOLOGY	3.735 (2.361)	8.275 (2.355)	2.739 (2.475)	5.402 (1.569)	5.344 (2.210)	-.437 (1.605)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 18E (Continued)

16 PERSONALITY FACTOR QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6
OPTICAL TECHNOLOGY	4.136 (2.480)	8.129 (2.183)	3.848 (2.409)	4.632 (1.858)	3.465 (1.629)	.601 (2.251)
MEDICAL LABORATORY ASSISTANT	8.597 (2.403)	9.302 (2.290)	4.441 (2.489)	5.796 (2.298)	3.290 (1.660)	.988 (2.098)
SALES	6.642 (2.888)	9.182 (2.313)	4.169 (2.446)	3.696 (1.870)	4.527 (1.976)	.312 (2.210)
ACCOUNTING	7.265 (2.773)	7.281 (2.215)	2.970 (2.444)	5.225 (1.677)	3.692 (1.923)	.701 (1.843)
CLERICAL TRAINING	8.787 (2.134)	7.213 (2.199)	3.334 (2.419)	5.319 (1.773)	4.049 (1.989)	.557 (1.739)
SECRETARIAL TRAINING	9.216 (2.003)	7.337 (2.160)	3.233 (2.319)	5.336 (1.722)	3.776 (2.030)	.467 (1.769)
DATA PROCESSING	6.920 (2.874)	7.870 (2.702)	3.441 (2.550)	4.949 (1.986)	3.242 (1.843)	.350 (1.665)

NOTE: Standard deviations in parentheses

* Discriminant functions having a χ^2 with $P < .05$

TABLE 19E

MINNESOTA IMPORTANCE QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR MALE OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6
ELECTRONICS	-1.669 (2.198)	.617 (2.166)	1.687 (2.264)	-.039 (2.458)	-1.645 (2.316)	3.234 (2.155)
POWER AND HOME ELECTRICITY	-1.224 (2.381)	.588 (2.073)	1.809 (2.291)	.065 (2.070)	-1.294 (2.361)	4.182 (2.083)
CARPENTRY	-.346 (2.304)	.279 (2.165)	1.812 (2.354)	.420 (2.091)	-.927 (2.628)	3.403 (1.952)
AUTOMOTIVE	.127 (2.155)	.236 (2.043)	1.560 (2.241)	.032 (2.032)	-1.405 (2.422)	3.834 (2.095)
MECHANICAL DRAFTING AND DESIGN	-1.330 (2.308)	.346 (1.987)	2.087 (2.486)	-.818 (2.182)	-.744 (2.374)	3.857 (2.125)
DIESEL MECHANICS	-.380 (2.360)	-.180 (2.054)	2.812 (2.403)	-.049 (2.334)	-1.352 (2.329)	3.707 (1.958)
MACHINE SHOP	-1.343 (2.384)	.482 (2.047)	1.006 (2.172)	.919 (2.174)	-.806 (2.193)	4.325 (2.232)
WELDING	-.942 (2.452)	-.448 (2.140)	1.417 (2.318)	.329 (2.174)	-.540 (2.298)	3.393 (2.420)
FARM EQUIPMENT MECHANICS	-.110 (1.803)	.683 (2.499)	1.396 (2.329)	.392 (2.055)	-1.660 (2.101)	3.373 (2.497)
AIRCRAFT MECHANICS	-2.110 (2.404)	.122 (2.412)	2.463 (2.476)	.597 (2.289)	-1.600 (2.475)	3.701 (2.428)
AGRI-TECHNOLOGY	-.330 (2.479)	1.871 (2.178)	1.846 (2.418)	.279 (2.101)	-.378 (2.221)	3.352 (2.182)
OPTICAL TECHNOLOGY	-2.328 (3.022)	.450 (2.051)	-.545 (2.664)	.398 (2.736)	-1.777 (2.622)	3.244 (2.334)

NOTE: Standard deviations in parentheses

* Discriminant functions having a χ^2 with $P < .05$

TABLE 20E

MINNESOTA IMPORTANCE QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR MALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4
ELECTRONICS	1.677 (2.142)	4.442 (1.892)	1.674 (1.911)	2.213 (2.141)
POWER AND HOME ELECTRICITY	2.463 (2.196)	4.532 (1.858)	2.866 (2.062)	2.492 (1.950)
CARPENTRY	4.178 (2.251)	4.514 (1.965)	1.391 (1.826)	2.261 (2.218)
AUTOMOTIVE	4.050 (2.268)	4.860 (2.234)	2.793 (2.162)	1.632 (2.240)
MECHANICAL DRAFTING AND DESIGN	2.539 (2.258)	4.995 (1.809)	3.162 (1.984)	2.025 (2.229)
DIESEL MECHANICS	1.652 (3.046)	6.735 (2.220)	1.752 (1.605)	.942 (2.104)
MACHINE SHOP	2.832 (2.296)	4.534 (2.055)	1.747 (2.242)	2.473 (2.307)
WELDING	3.478 (2.516)	6.281 (2.318)	1.668 (1.694)	2.136 (2.060)
FARM EQUIPMENT MECHANICS	4.316 (2.067)	3.723 (2.339)	1.641 (2.373)	1.873 (1.592)
AIRCRAFT MECHANICS	.976 (2.715)	4.460 (2.100)	1.931 (1.671)	.923 (1.924)
AGRI-TECHNOLOGY	2.198 (2.554)	4.136 (2.028)	1.722 (2.012)	2.725 (2.360)
OPTICAL TECHNOLOGY	2.840 (3.023)	5.885 (1.679)	2.649 (1.625)	4.284 (2.232)

NOTE: Standard deviation in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 21E

MINNESOTA IMPORTANCE QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR FEMALE OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATIONS	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4
PRACTICAL	- 4.681	1.645	9.042	3.105
NURSING	(3.660)	(2.275)	(3.043)	(2.286)
COSMETOLOGY	.178	3.907	9.619	3.083
	(2.504)	(3.022)	(3.151)	(2.288)
DENTAL	- 1.052	2.330	7.730	1.981
ASSISTANT	(3.051)	(2.643)	(3.408)	(2.198)
MEDICAL	- 2.419	2.392	8.997	.883
LABORATORY ASSIST.	(4.224)	(2.299)	(2.976)	(2.283)
CLERICAL	.707	1.910	8.219	3.125
TRAINING	(2.680)	(2.551)	(2.932)	(2.304)
SECRETARIAL	.852	1.103	9.463	2.913
TRAINING	(2.837)	(2.394)	(3.016)	(2.407)

NOTE: Standard deviations in parentheses

* Discriminant functions having a χ^2 with $P <.05$

TABLE 22E

MINNESOTA IMPORTANCE QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR FEMALE OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4
PRACTICAL NURSING	-4.399 (3.356)	1.183 (2.326)	5.310 (2.351)	1.766 (2.220)
COSMETOLOGY	.550 (2.466)	3.067 (2.831)	6.403 (2.543)	1.856 (2.006)
DENTAL ASSISTANT	-.521 (2.875)	2.475 (2.524)	3.303 (2.764)	.382 (1.903)
MEDICAL LABORATORY ASSISTANT	-2.708 (4.285)	1.180 (2.495)	6.574 (2.183)	-.503 (2.740)
CLERICAL TRAINING	.744 (2.558)	1.740 (2.710)	4.827 (2.268)	1.576 (2.112)
SECRETARIAL TRAINING	1.225 (2.703)	.656 (2.353)	5.525 (2.452)	1.637 (2.225)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

TABLE 23E

MINNESOTA IMPORTANCE QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7	FUNCTION 8	FUNCTION 9	FUNCTION 10
ELECTRONICS	-.575 (2.263)	3.270 (2.357)	.928 (2.330)	1.901 (2.705)	5.306 (2.688)	1.883 (2.042)	.652 (2.655)	3.750 (2.025)	6.181 (2.198)	7.046 (2.205)
POWER AND HOME ELECTRICITY	-.852 (2.459)	3.093 (2.368)	1.307 (2.334)	2.253 (2.863)	4.902 (2.464)	2.052 (2.034)	1.257 (2.598)	4.055 (2.019)	6.766 (2.260)	6.985 (2.206)
PRACTICAL NURSING	-9.419 (3.737)	2.051 (2.890)	1.282 (2.319)	2.251 (2.905)	4.687 (2.674)	2.046 (2.232)	1.143 (2.691)	4.090 (2.171)	6.461 (2.349)	6.895 (2.339)
CARPENTRY	-1.117 (2.586)	3.078 (2.299)	1.937 (2.443)	2.644 (2.749)	4.426 (2.615)	1.963 (2.210)	1.361 (2.500)	4.359 (2.278)	6.295 (2.156)	7.275 (2.632)
AUTOMOTIVE	-1.084 (2.665)	2.808 (2.238)	2.504 (2.251)	2.202 (2.913)	4.434 (2.307)	1.797 (1.995)	.828 (2.624)	3.918 (2.173)	6.459 (2.189)	6.843 (2.228)
MECHANICAL DRAFTING AND DESIGN	-.459 (3.070)	3.616 (2.116)	1.611 (2.314)	1.881 (2.778)	5.208 (2.576)	2.400 (1.921)	1.332 (2.484)	4.021 (1.967)	6.537 (2.156)	6.277 (2.249)
DIESEL MECHANICS	-.917 (2.304)	2.543 (2.430)	2.184 (2.177)	1.887 (2.391)	5.515 (2.442)	1.731 (2.397)	1.202 (2.560)	5.084 (2.224)	6.662 (2.195)	7.117 (2.503)
MACHINE SHOP	-.617 (2.559)	2.883 (2.317)	1.049 (2.376)	2.584 (3.028)	4.218 (2.377)	2.181 (2.088)	.485 (2.557)	4.532 (2.320)	7.269 (2.328)	6.719 (2.379)
WELDING	-.389 (2.696)	2.767 (2.307)	1.666 (2.456)	1.689 (3.072)	4.234 (2.446)	2.494 (2.265)	1.047 (2.605)	4.483 (2.131)	6.303 (2.497)	6.922 (2.460)

NOTE: Standard deviations in parentheses

* Discriminant functions having a χ^2 with $P < .05$

TABLE 23E (Continued)

MINNESOTA IMPORTANCE QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7	FUNCTION 8	FUNCTION 9	FUNCTION 10
FARM EQUIPMENT MECHANICS	-1.184 (2.758)	3.123 (2.719)	1.788 (1.669)	2.413 (3.140)	4.163 (2.133)	1.354 (2.032)	.628 (2.210)	3.918 (1.798)	6.203 (2.109)	7.127 (2.584)
COSMETOLOGY	-4.690 (2.939)	3.935 (2.390)	3.678 (3.011)	2.071 (2.744)	5.540 (2.789)	2.228 (2.076)	1.135 (2.538)	4.133 (2.031)	6.738 (2.350)	7.115 (2.472)
AIRCRAFT MECHANICS	-.570 (2.714)	2.272 (2.362)	.572 (2.326)	2.938 (3.193)	5.713 (2.656)	2.453 (2.186)	.809 (2.868)	4.201 (2.495)	6.075 (2.374)	6.759 (2.760)
DENTAL ASSISTANT	-5.620 (3.399)	3.479 (2.532)	2.173 (2.385)	1.051 (3.222)	3.910 (2.651)	1.788 (2.283)	1.126 (2.476)	4.524 (2.300)	7.012 (2.168)	6.376 (1.914)
AGRI-TECHNOLOGY	-1.400 (2.747)	4.127 (2.537)	1.869 (2.645)	3.370 (2.925)	4.505 (2.740)	1.256 (2.106)	1.095 (2.890)	4.325 (2.057)	6.500 (2.020)	6.772 (1.914)
OPTICAL TECHNOLOGY	-1.148 (4.096)	3.394 (2.649)	.028 (2.412)	.663 (2.692)	4.190 (2.855)	2.757 (2.366)	-.009 (3.117)	3.156 (2.457)	6.712 (2.778)	7.777 (2.392)
MEDICAL LABORATORY ASSISTANT	-6.462 (4.672)	2.018 (2.736)	1.826 (2.212)	1.306 (3.228)	4.844 (2.654)	1.387 (2.300)	.161 (2.268)	4.704 (2.120)	7.138 (2.101)	6.344 (2.591)
SALES	-1.844 (3.171)	4.149 (2.150)	.949 (2.320)	4.062 (3.222)	4.480 (2.872)	2.379 (1.945)	1.842 (2.224)	4.086 (2.062)	8.022 (2.406)	7.148 (2.337)
ACCOUNTING	-2.736 (3.548)	4.565 (2.421)	1.166 (2.433)	1.423 (2.987)	4.542 (2.667)	1.670 (2.178)	1.680 (2.737)	4.067 (2.286)	6.495 (2.274)	6.868 (2.273)
CLERICAL TRAINING	-4.363 (3.074)	4.737 (2.530)	2.028 (2.483)	2.051 (2.796)	4.197 (2.493)	2.393 (2.195)	.924 (2.621)	4.133 (2.076)	6.424 (2.214)	6.918 (2.266)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P <.05$

TABLE 23E (Continued)

MINNESOTA IMPORTANCE QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE GRADUATE POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7	FUNCTION 8	FUNCTION 9	FUNCTION 10
SECRETARIAL TRAINING	-4.582 (3.304)	5.280 (2.498)	1.346 (2.318)	2.355 (2.961)	4.928 (2.524)	1.959 (2.256)	.727 (2.724)	4.241 (2.145)	6.503 (2.277)	6.868 (2.387)
DATA PROCESSING	-2.147 (3.530)	3.531 (2.390)	.962 (2.205)	1.105 (3.149)	5.121 (2.565)	1.979 (2.218)	.994 (2.509)	4.556 (2.194)	6.976 (2.389)	7.398 (2.194)

NOTE: Standard deviations in parentheses

* Discriminant functions having a X^2 with $P < .05$

TABLE 24E

MINNESOTA IMPORTANCE QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7	FUNCTION 8	FUNCTION 9
ELECTRONICS	1.269 (2.256)	2.269 (2.213)	1.593 (2.584)	5.678 (1.948)	-1.033 (2.174)	4.093 (2.068)	5.609 (2.687)	4.353 (2.190)	-.521 (1.830)
POWER AND HOME ELECTRICITY	1.247 (2.360)	2.258 (1.948)	2.542 (2.783)	5.523 (2.169)	-.489 (2.582)	3.985 (2.022)	6.208 (2.233)	5.675 (2.385)	-1.218 (2.052)
PRACTICAL NURSING	-7.423 (3.539)	2.106 (2.548)	2.651 (2.525)	5.634 (2.178)	-.736 (2.620)	4.370 (2.280)	6.394 (2.342)	5.120 (2.523)	-.847 (2.181)
CARPENTRY	.366 (2.263)	2.280 (2.358)	3.520 (2.638)	5.246 (2.277)	-.381 (2.271)	5.365 (1.810)	6.511 (2.262)	4.624 (2.054)	-.557 (2.157)
AUTOMOTIVE	.498 (2.313)	1.882 (2.120)	4.128 (2.664)	5.612 (2.246)	-.752 (2.896)	4.021 (2.253)	6.386 (2.669)	5.043 (2.449)	-1.192 (1.960)
MECHANICAL DRAFTING AND DESIGN	1.166 (2.559)	2.208 (2.027)	2.514 (2.564)	6.036 (2.379)	-.409 (2.334)	3.802 (2.115)	6.679 (1.993)	5.632 (2.515)	-1.407 (1.954)
DIESEL MECHANICS	1.111 (3.340)	2.443 (2.553)	2.161 (2.982)	7.233 (2.067)	-2.628 (2.586)	5.096 (1.554)	6.232 (2.670)	4.891 (2.424)	-.909 (1.854)
MACHINE SHOP	1.063 (2.206)	1.634 (2.350)	2.926 (2.523)	4.827 (2.235)	-.880 (2.943)	4.846 (2.444)	6.193 (2.046)	4.994 (2.169)	-1.028 (2.238)
WELDING	1.386 (1.901)	2.025 (1.938)	3.543 (2.816)	6.229 (1.971)	-1.800 (2.829)	4.986 (2.034)	7.649 (2.718)	4.424 (2.404)	-.305 (1.836)

NOTE: Standard deviations in parentheses

* Discriminant functions having a χ^2 with $P < .05$

TABLE 24E (Continued)

MINNESOTA IMPORTANCE QUESTIONNAIRE GROUP CENTROIDS AND STANDARD DEVIATIONS ON DISCRIMINANT FUNCTIONS* FOR COMBINED OCCUPATIONS IN THE EMPLOYED RELATED POPULATION

OCCUPATION	FUNCTION 1	FUNCTION 2	FUNCTION 3	FUNCTION 4	FUNCTION 5	FUNCTION 6	FUNCTION 7	FUNCTION 8	FUNCTION 9
CLERICAL TRAINING	-2.385 (2.857)	4.257 (2.428)	3.576 (2.840)	5.404 (2.062)	-1.220 (2.644)	4.418 (2.410)	6.267 (2.585)	5.282 (2.416)	-.826 (2.067)
SECRETARIAL TRAINING	-1.944 (3.066)	4.598 (2.377)	2.524 (2.504)	5.786 (2.287)	-.818 (2.770)	4.644 (2.241)	6.278 (2.611)	5.155 (2.364)	-1.115 (2.068)
DATA PROCESSING	-.065 (2.894)	2.579 (2.182)	1.664 (2.364)	6.088 (2.148)	-1.325 (2.632)	4.527 (2.278)	6.955 (2.253)	5.516 (2.140)	-1.052 (2.033)

NOTE: Standard deviations in parentheses
* Discriminant functions having a χ^2 with $P < .05$

APPENDIX F

MINNESOTA AREA VOCATIONAL-TECHNICAL SCHOOLS THAT COOPERATED IN PROJECT MINI-SCORE

Alexandria

Austin

Canby

Duluth

Eveleth

Faribault

Grand Rapids

Granite Falls

Hibbing

Jackson

Mankato

Minneapolis

Moorhead

Pine City

Pipestone

St. Cloud

Anoka-Hennepin

Staples

Thief River Falls

Wadena

Willmar

Winona

Brainerd

Detroit Lakes

OTHER PROJECT MINI-SCORE PUBLICATIONS

1. Nelson, H. F. and Pucel, D. J. Area School Student Selection Project: Selected Descriptive Data Gathered on Approximately 6400 Applicants to the Cooperating Area Vocational-Technical Schools of Minnesota During the Period from October 1, 1966 to July 1, 1967. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1967.

2. Pucel, D. J. "The Centour Methodology Applied to Vocational Student Counseling and Admission." Journal of Industrial Teacher Education, Fall, 1969.

3. Pucel, D. J. The Student: An Integral Part of Vocational Program Development and Evaluation. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1969.

4. Pucel, D. J. and Nelson, H. F. Area School Student Selection Project: A Preliminary Look at the Test Battery Data. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1967.

5. Pucel, D. J., Nelson, H. F. and Wheeler, D. N. A Comparison of the Employment Success of Vocational-Technical School Graduates, Drop-Outs, and Persons Not Admitted to Vocational Programs. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1971.

6. Pucel, D. J., Nelson, H. F., and Wheeler, D. N. Differentiating Among Graduates of Vocational-Technical Curriculums. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1970, ERIC 043-757; VT 011-749.

7. Pucel, D. J., and Nelson, H. F. General Aptitude Test Battery (B-1002 Form B) Training Success Norms. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1969, ERIC 029-992; VT 008-629.

8. Pucel, D. J., and Nelson, H. F. General Aptitude Test Battery (B-1002 Form B) Training Success Norms Including Supplement One. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1970.

9. Pucel, D. J., and Nelson, H. F. Minnesota Vocational Interest Inventory Training Success Norms. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1969.

10. Pucel, D. J., and Nelson, H. F. Minnesota Vocational Interest Inventory Training Success Norms Including Supplement One. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1970, ERIC 042-025; VT 011-393.

11. Pucel, D. J., and Nelson, H. F. Project MINI-SCORE: An Interim Report, 1966-69, rev. ed. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1969.

12. Pucel, D. J., and Nelson, H. F. *Project MINI-SCORE: Some Preliminary Implications for Vocational Guidance*. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1969, ERIC 025-658; VT 007-582.

13. Pucel, D. J., and Nelson, H. F., and Wheeler, D. N. "Questionnaire Follow-Up Returns as a Function of Incentives and Responder Characteristics." *Vocational Guidance Quarterly*, March, 1971.

14. Pucel, D. J., and Nelson, H. F., and Wheeler, D. N. *Questionnaire Follow-Up Returns as a Function of Incentives and Responder Characteristics*, Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1970, ERIC 037-536; VT 010-042.

15. Pucel, D. J. and Nelson, H. F. *What Happens to Graduates of Minnesota's Area Vocational-Technical Schools*. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1969.

16. Pucel, D. J., and others. *Vocational Maturity and Vocational Training*. Minneapolis: Project MINI-SCORE, Department of Industrial Education, University of Minnesota, 1970.

VOLUMES OF PROJECT-MINI SCORE* FINAL REPORT

PROJECT MINI-SCORE FINAL REPORT

PROJECT MINI-SCORE FINAL TECHNICAL REPORTS:

- Report One - The Ability of Standardized Test Instruments to Predict Training Success and Employment Success
- Report Two - The Ability of Standardized Test Instruments to Differentiate Membership in Different Vocational-Technical Curricula
- Report Three - General Aptitude Test Battery Training Success Norms and Employment Success Norms
- Report Four - Minnesota Vocational Interest Inventory Training Success Norms and Employment Success Norms
- Report Five - Minnesota Scholastic Aptitude Test and Vocational Development Inventory Training Success Norms and Employment Success Norms

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*The project was commonly known as Project MINI-SCORE (Minnesota Student Characteristics and Occupational Related Education) but was originally proposed with the formal title: Characteristics of Full-Time Students in Post-Secondary Trade Courses; U.S.O.E. project number HRD 5-0148.